09/936665
AA # 5

WEST Search History

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Set Name side by side	Query	Hit Count	Set Name result set
DB=USPT,PGPB,JPAB,EPAB,DWPI; PLUR=YES; OP=ADJ			
L6	l1 with L2	217	L6
L5	l1 near10 L2	79	L5
L4	l1 near5 L2	29	L4
L3	l1 near3 L2	19	L3
L2	(stem! or primary! or pleuripotent!) near cell	16155	L2
L1	adipos$ or fat or fatty or lipo$	352297	L1

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Terms	Documents
l1 with L2	217

Previous Page Next Page

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Search Results - Record(s) 51 through 100 of 217 returned.

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Generate Collection Print

Terms	Documents
l1 with L2	217

Previous Page Next Page

Generate Collection | Print

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Generate Collection | Print

Terms	Documents
l1 with L2	217

Previous Page Next Page

Generate Collection | Print

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200. EP 1165830 A1, WO 200053795 A1, AU 200035223 A . Mammalian lipo-derived stem cells free of mature adipocytes and lipo-derived lattices useful to generate differentiated tissues and structures in vivo and in vitro. BENHAIM, P, et al. A01N063/00 A61K048/00 C12N005/00 C12N005/08 C12N015/63 C12N015/85 C12Q001/00.

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09/936665
Aff #5

=> s lipo? or fat or fatty or adipos?
L1 1896817 LIPO? OR FAT OR FATTY OR ADIPOS?

=> s cell(2n)(pleuripot? or primary or stem)
L2 140644 CELL(2N)(PLEURIPOT? OR PRIMARY OR STEM)

=> s l1 and l2

L3 3488 L1 AND L2

=> s l1(l)l2
L4 2285 L1(L) L2

=> s cultur? or (in vitro)
L5 4508967 CULTUR? OR (IN VITRO)

=> s l4 and l5
L6 1400 L4 AND L5

=> s stem cell??
'?' TRUNCATION SYMBOL NOT VALID WITHIN 'CELL??'
'?' TRUNCATION SYMBOL NOT VALID WITHIN 'CELL??'
'?' TRUNCATION SYMBOL NOT VALID WITHIN 'CELL??'
'?' TRUNCATION SYMBOL NOT VALID WITHIN 'CELL??'
'?' TRUNCATION SYMBOL NOT VALID WITHIN 'CELL??'
The truncation symbol ? may be used only at the end of a search term. To specify a variable character within a word use '!', e.g., 'wom!n' to search for both 'woman' and 'women'. Enter "HELP TRUNCATION" at an arrow prompt (=>) for more information.

=> help truncation
Truncation symbols are used to retrieve various forms of your search terms. The symbols can be combined in one search term.

Symbol	Definition	Example	Retrieves
?	Any number of characters	S STEROID?	STEROID STEROIDS STEROIDAL
	Left truncation in some fields	S ?METHANE	METHANE TRIHALOMETHANE NITROMETHANE
#	One or zero characters at the end of a term	S VAPOR#	VAPOR VAPORS
!	One character at the end of or within a term	S WOM!N	WOMAN WOMEN
!#	At least one character, and no more than two, at the end of a term	S STEROID!#	STEROIDS STEROIDAL

Multiple occurrences of the '#' and the '!' are allowed.

Left truncation, using the three truncation types, is also available for some fields in certain files. Left truncation of a search term can be used alone or, in some cases, in combination with right truncation. The cases which may not be used are: '?text#', '#text?' and '!text?'. To learn whether any fields in the current file have left truncation, enter HELP SFIELDS at an arrow prompt (=>) in the file.

=> s stem cell#
3 FILES SEARCHED...
L7 154891 STEM CELL#

=> s l1 and l5 and l7
L8 1807 L1 AND L5 AND L7

=> s l1(l)l7
L9 2063 L1(L) L7

=> s l9 and l5
L10 979 L9 AND L5

=> s adipose(3n)l7
L11 27 ADIPOSE(3N) L7

=> s l11 and l5
L12 21 L11 AND L5

=> dup rem l12
PROCESSING COMPLETED FOR L12
L13 15 DUP REM L12 (6 DUPLICATES REMOVED)

=> d his

(FILE 'HOME' ENTERED AT 16:26:53 ON 18 JUN 2002)

FILE 'BIOSIS, EMBASE, MEDLINE, WPIDS, HCAPLUS' ENTERED AT 16:27:07 ON 18
JUN 2002
L1 1896817 S LIPO? OR FAT OR FATTY OR ADIPOS?
L2 140644 S CELL(2N)(PLEURIPOT? OR PRIMARY OR STEM)
L3 3488 S L1 AND L2
L4 2285 S L1(L)L2
L5 4508967 S CULTUR? OR (IN VITRO)
L6 1400 S L4 AND L5
L7 154891 S STEM CELL#
L8 1807 S L1 AND L5 AND L7
L9 2063 S L1(L)L7
L10 979 S L9 AND L5
L11 27 S ADIPOSE(3N)L7
L12 21 S L11 AND L5
L13 15 DUP REM L12 (6 DUPLICATES REMOVED)

=> l1(3n)l7
L1(3N)L7 IS NOT A RECOGNIZED COMMAND
The previous command name entered was not recognized by the system. For a list of commands available to you in the current file, enter "HELP COMMANDS" at an arrow prompt (=>).

=> s l1(3n)l7
L14 128 L1(3N) L7

=> s l1(5n)l7
L15 227 L1(5N) L7

=> s l1(10n)l7
L16 402 L1(10N) L7

=> s l16 and l5
L17 202 L16 AND L5

=> dup rem l17
PROCESSING COMPLETED FOR L17
L18 117 DUP REM L17 (85 DUPLICATES REMOVED)

=> s l18 and py<2000
1 FILES SEARCHED...
3 FILES SEARCHED...
4 FILES SEARCHED...
L19 75 L18 AND PY<2000

=> d l19 ibib abs 1-75

L19 ANSWER 1 OF 75 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
ACCESSION NUMBER: 2000:172635 BIOSIS
DOCUMENT NUMBER: PREV200000172635
TITLE: Ten commandments for preventing contamination of primary cell ***cultures*** .
AUTHOR(S): Vierck, Janet L.; Byrne, Katherine; Mir, Priya S.; Dodson, Michael V. (1)
CORPORATE SOURCE: (1) Muscle Biology Laboratory, Department of Animal Sciences, Washington State University, Pullman, WA, 99164-6310 USA
SOURCE: Methods in Cell Science., (***March, 1999***) Vol. 22,

No. 1, pp. 33-41.
ISSN: 1381-5741.
DOCUMENT TYPE: Article
LANGUAGE: English
SUMMARY LANGUAGE: English
AB Procedures for preventing contamination in primary cell ***cultures*** must be carefully defined and strictly followed in order to obtain healthy cells. Protocols have been developed and refined in our laboratory for establishing primary ***cultures*** of muscle and ***fat*** ***stem*** ***cells*** without contamination from a variety of animals. Contamination of cell ***cultures*** is not only frustrating, but is also very expensive both in time and loss of materials. Through the consistent use of proper aseptic techniques, most instances of contamination may be avoided. We suggest that the basic principles detailed here will find wide applicability in the ***culturing*** of primary cells without contamination from many different types of animals and tissues.

L19 ANSWER 2 OF 75 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
ACCESSION NUMBER: 2000:14941 BIOSIS
DOCUMENT NUMBER: PREV200000014941
TITLE: Abnormal osteogenesis in osteoporotic patients is reflected by altered mesenchymal stem cells dynamics.
AUTHOR(S): Rodriguez, J. Pablo (1); Garat, Solange; Gajardo, Hector; Pino, Ana Maria; Seitz, German
CORPORATE SOURCE: (1) Laboratorio de Biologia Celular, INTA, Universidad de Chile, Casilla 138-11, Santiago Chile
SOURCE: Journal of Cellular Biochemistry, (***Dec. 1, 1999***) Vol. 75, No. 3, pp. 414-423.
ISSN: 0730-2312.
DOCUMENT TYPE: Article
LANGUAGE: English
SUMMARY LANGUAGE: English
AB Bone marrow contains a population of mesenchymal stem cells with the ability to differentiate into cells that form bone, cartilage, ***adipose*** , and other connective tissues. ***Stem*** ***cells*** can be isolated from bone marrow aspirates and expanded in ***vitro*** . Presently, most stem cells studies have been performed in cells obtained from "healthy" control subjects. The goal of this study was to compare the functional characteristics of mesenchymal stem cells derived from "healthy" control and osteoporotic postmenopausal women to better understand the mechanisms involved in the pathogenesis of this disease. Osteoporotic and control stem cells have similar morphology and size and express similar cell surface antigens as evidenced by their reactivity with cell specific monoclonal antibodies. Mesenchymal stem cells from osteoporotic women differ from controls in having a lower growth rate than control cells, being refractory to the mitogenic effect of IGF-1, and exhibiting a deficient ability to differe ntiate into the osteogenic linage as evidenced by the alkaline phosphatase activity and calcium phosphate deposition. We conclude that in osteoporosis stem cell growth, proliferative response and osteogenic differentiation are significantly affected. Also, the study of mesenchymal stem cells from osteoporotic postmenopausal women may provide a better understanding of the mechanisms involved in the pathogenesis of the osteoporosis. It may also serve to test in ***vitro*** in rapid manner novel new therapeutic strategies.

L19 ANSWER 3 OF 75 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
ACCESSION NUMBER: 1999:89622 BIOSIS
DOCUMENT NUMBER: PREV199900089622
TITLE: Treatment of mycotic infections after haemopoietic progenitor cell transplantation with liposomal amphotericin-B.
AUTHOR(S): Krueger, W. H. (1); Kroeger, N.; Ruessmann, B.; Renges, H.; Kabisch, H.; Zander, A. R.
CORPORATE SOURCE: (1) Bone Marrow Transplantation Unit, Dep. Oncol./Haematol., Univ.-Hosp. Eppendorf, Martinistrasse 52, 20246 Hamburg Germany
SOURCE: Bone Marrow Transplantation, (***Dec., 1998***) Vol. 22, No. SUPPL. 4, pp. S10-S13.
ISSN: 0268-3369.
DOCUMENT TYPE: Article
LANGUAGE: English
AB 115 patients undergoing allogeneic or autologous bone marrow or peripheral blood ***stem*** ***cell*** transplantation were treated empirically or for documented fungal infection with ***liposomal*** amphotericin-B in doses up to 10mg/kg bodyweight for a duration up to 61 days. The therapy was excellent tolerated and clinical side effects occurred in only eight patients. The drug had to be withdrawn in one episode. A significant influence of liposomal amphotericin-B on laboratory parameters was not observed. Creatinine increased under therapy from a median base point of 1,0 (0,2-3,5) mg/dl to the upper normal value of 1,4 (0,4-4,2) mg/dl. Heavy increases of creatinine as well as of bilirubin, OT and PT were mostly associated with GvHD or regimen related toxicity. Considering the high risk state of the patients the overall response rate was favourable with 62,9%. However, despite administration of liposomal amphotericin-B ***culture*** -proven mycoses were associated with a high morbidity (93,3%). Only one of fourteen patients was cured from Candida lambica septicaemia. We conclude that the antimycotic therapy with liposomal amphotericin-B has a low incidence of side effects. This should, considering the high mortality of fungal infections in BMT receipients, encourage investigators to perform dose escalating studies against the conventional formulation.

L19 ANSWER 4 OF 75 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
ACCESSION NUMBER: 1998:119653 BIOSIS
DOCUMENT NUMBER: PREV199800119653
TITLE: Insulin-like growth factor (IGF)-I and -II and IGFBP secretion by ovine satellite cell strains grown alone or in coculture with 3T3-L1 preadipocytes.
AUTHOR(S): Hossner, K. L. (1); Yemm, R.; Vierck, J.; Dodson, M. V.
CORPORATE SOURCE: (1) Dep. Anim. Sci., Colorado State Univ., Fort Collins, CO 80523 USA
SOURCE: In Vitro Cellular & Developmental Biology Animal, (***Nov.-Dec., 1997***) Vol. 33, No. 10, pp. 791-795.
ISSN: 1071-2690.
DOCUMENT TYPE: Article
LANGUAGE: English
AB The current study was designed to examine the effects of muscle and ***fat*** ***stem*** ***cell*** coculture on the secretion of insulinlike growth factor (IGF)-I and -II and IGF binding proteins (IGFBP) by these cells. Two sheep satellite cell strains with negligible or high potential for differentiation (IOA and 01, respectively) were placed in coculture with 3T3-L1 preadipocytes using a filter support to separate the two cell types. Media conditioned by the cells grown alone or in coculture were analyzed for IGFs by RIA or IGFBPs by ligand blotting. The numbers of satellite cells and preadipocytes declined throughout the 5-d ***culture*** period, although coculture slowed the 3T3-L1 decline but hastened the satellite cell decline. The satellite cell strains and 3T3-L1 cells secreted small amounts of IGF-I (ltoreq 2 ng/ml) and IGF-II (< 10 ng/ml) over the 5-d ***culture*** period. Coculture did not increase the amount of IGF-I and -II in conditioned media. The lowly differentiating 10A cells secreted barely detectable amounts of the low molecular weight IGFBP-3 subunit (34 kDa), IGFBP-2 (28 kDa), and IGFBP-4 (18 kDa). Coculture of 10A and 3T3-L1 cells potentiated secretion of IGFBP-2 and -3. Strain 01, which readily differentiates, secreted high levels of both IGFBP-3 subunits (34 and 39 kDa) and IGFBP-2 (28 kDa), as well as significant amounts of the 18 kDa IGFBP-4. Coculture did not alter IGFBP secretion of 01, cells. This study showed that while IGF-I and -II levels in media conditioned by sheep satellite cell strains are low and relatively invariant, the intensity and complexity of IGFBP patterns increases with time in ***culture*** and with the potential for differentiation of the satellite cell strains. Coculture with preadipocytes appeared to potentiate IGFBP secretion while reducing satellite cell viability.

L19 ANSWER 5 OF 75 BIOSIS COPYRIGHT 2002 BIOLOGICAL

ABSTRACTS INC.
ACCESSION NUMBER: 1997:510668 BIOSIS
DOCUMENT NUMBER: PREV199799809871
TITLE: Characterization of stromal progenitor cells enriched by flow cytometry.
AUTHOR(S): Zohar, Ron (1); Sodek, Jaro; McCulloch, Christopher A. G.
CORPORATE SOURCE: (1) 4384 Medical Sci. Build., Univ. Toronto, 8 Taddle Creek Rd., Toronto, ON M5S 1A8 Canada
SOURCE: Blood, (1997) Vol. 90, No. 9, pp. 3471-3481. ISSN: 0006-4971.
DOCUMENT TYPE: Article
LANGUAGE: English
AB The progenitors for cells of bone, cartilage, ***fat*** , and muscle are thought to be derived from mesenchymal ***stem*** ***cells*** but despite extensive study of stromal cell differentiation, neither mesenchymal stem cells or the more committed, tissue specific progenitors have been well-characterized. In this study we used flow cytometry to isolate from fetal rat periosteum a population of small, slowly cycling cells with low cytoplasmic granularity (S cells) that display stem cell characteristics. On plating, S cells exhibited a 90% higher labeling index with (3H)-thymidine compared to unsorted cells and when grown in ***culture*** generated cartilage, adipocyte, and smooth muscle phenotypes, in addition to bone. Only the S-cell population showed extensive self-renewal of cells with osteogenic potential. Electron microscopy showed that S cells have high nuclear:cytoplasmic ratios with large condensed nuclei and a paucity of cytoplasmic organelles. Freshly sorted suspensions of immunocytochemically stained S cells did not express differentiation-associated markers such as type I, II, and III collagens, alkaline phosphatase, or osteopontin. However, after attachment, S cells became immunopositive for collagens I, II, III, osteopontin, and also for the cell surface receptor CD44, which mediates cell attachment to hyaluronan and osteopontin. These studies show that viable osteogenic precursor cells with the stem cell characteristics of self-renewal, high proliferative capacity, and multipotentiality can be enriched from heterogeneous stromal cell populations with simple flow cytometric methods. These cells may be useful for regeneration of stromal tissues.

L19 ANSWER 6 OF 75 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
ACCESSION NUMBER: 1997:207399 BIOSIS
DOCUMENT NUMBER: PREV199799506602
TITLE: Cellular and molecular neurosurgery: Pathways from concept to reality-Part II: Vector systems and delivery methodologies for gene therapy of the central nervous system.
AUTHOR(S): Zlokovic, Berislav V. (1); Apuzzo, Michael L. J.
CORPORATE SOURCE: (1) 2025 Zonal Ave., RMR 506, Los Angeles, CA 90033 USA
SOURCE: Neurosurgery (Baltimore), (1997) Vol. 40, No. 4, pp. 805-813. ISSN: 0148-396X.
DOCUMENT TYPE: General Review
LANGUAGE: English
AB Different vector systems that have been used and/or specifically developed for central nervous system (CNS) gene transfer studies are briefly discussed along with their advantages and disadvantages with respect to potential clinical application. These include retroviruses, recombinant herpes simplex virus, adenoviruses, adenoassociated viruses, encapsulation of plasmid deoxyribonucleic acid into cationic ***liposomes*** , and neural and oliogodendroglial ***stem*** ***cells*** . Particular attention has been paid to relate the modality of a specific CNS gene therapy to the strategy for adequate delivery of genetic material to the brain for either global or localized CNS neurodegenerative chronic disorder, as well as for CNS tumors and stroke. Techniques to circumvent the "impermeable" blood-brain barrier and how to breach the more versatile blood-brain-tumor barrier to deliver the genetic material to the target CNS cells are reviewed and include the following: 1) local stereotactic CNS injection/infusion of viral vectors, administration of vector producer cells, or cell replacement; 2) local administration of genetic material into the cerebrospinal fluid ventriculocisternal system; 3) osmotic opening of the blood-brain barrier; 4) local intra-arterial infusion; and 5) administration of blood-brain-tumor barrier permeabilizers, such as a bradykinin B2 agonist RMP-7. It is concluded that gene therapy for several brain disorders holds great potential, as suggested mainly by in ***vitro*** experiments and, to some extent, by a limited number of animal experiments. However, several drawbacks currently hamper the application of gene therapy under the clinical setting. The problems associated with gene therapy that still present major obstacles are as follows: 1) inefficient transfection of host cells by viral vectors; 2) restricted delivery of genetic material across vascular barriers of the CNS and brain tumors; 3) nonselective expression of the transgene; and 4) in situ CNS regulation of the transgene expression in a therapeutically controlled manner, as imposed by the course and phenotype of the CNS disease.

L19 ANSWER 7 OF 75 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
ACCESSION NUMBER: 1997:111424 BIOSIS
DOCUMENT NUMBER: PREV199799410627
TITLE: Insect midgut epithelium in ***vitro*** : An insect stem cell system.
AUTHOR(S): Loeb, Marcia J. (1); Hakim, Raziel S.
CORPORATE SOURCE: (1) Insect. Neurobiol. and Hormone Lab., U.S. Dep. Agric., Agric. Res. Serv., Beltsville, MD USA
SOURCE: Journal of Insect Physiology, (1996) Vol. 42, No. 11-12, pp. 1103-1111. ISSN: 0022-1910.
DOCUMENT TYPE: Article
LANGUAGE: English
AB Mixed cell ***cultures*** and stem cell ***cultures*** were prepared from midguts of Manduca sexta pharate fourth instar and mid-wandering fifth instar larvae. An extract prepared from the ***fat*** body was able to promote ***stem*** ***cell*** proliferation and affect differentiation in a dose-dependent manner. DNA synthesis activity was confirmed by use of (3H)thymidine. Immunohistological localization of bromodeoxyuridine (BrdU), a thymidine analog, indicated that dividing stem cells incorporated the label. In many cases, one of the daughter cells incorporated the label while the other did not; often this daughter appeared morphologically different from its sister cell. These results implied that one of the sister stem cells remained as a proliferating stem cell while the other sister was committed to differentiate. Studies strongly suggest that these midgut cell ***cultures*** comprise a true stem cell system. Cell-free conditioned medium from ***cultures*** of differentiating pharate fourth instar midgut cells induced development of larval columnar cells from mid-wandering fifth instar midgut stem cells. Conversely, conditioned medium from differentiating ***cultures*** of mid-wandering fifth instar midgut induced development of mid-wandering fifth instar low columnar cells from midgut stem cells isolated from pharate fourth instar larvae. Therefore, it appears that differentiating cells produce soluble cytokines which direct specific modes of differentiation by M. sexta stem cells.

L19 ANSWER 8 OF 75 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
ACCESSION NUMBER: 1997:87382 BIOSIS
DOCUMENT NUMBER: PREV199799379095
TITLE: A method for high efficiency YAC ***lipofection*** into murine embryonic ***stem*** ***cells*** .
AUTHOR(S): Lee, Jeannie T. (1); Jaenisch, Rudolf
CORPORATE SOURCE: (1) Whitehead Inst. Biomed. Res., 9 Cambridge Cent., Cambridge, MA 02138 USA
SOURCE: Nucleic Acids Research, (1996) Vol. 24, No. 24, pp. 5054-5055. ISSN: 0305-1048.
DOCUMENT TYPE: Article
LANGUAGE: English
AB We describe a modified protocol for introducing yeast artificial chromosomes (YACs) into murine embryonic stem (ES) cells by lipofection. With a decreased DNA:cell ratio, increased concentration of condensing agents and altered ***culture*** conditions, this protocol reduces the requirement for YAC DNA to a few micrograms, improves the recovery of neomycin-resistant ES colonies and increases the yield of clones containing both flanking vector markers and insert. These modifications

enable generation of sufficient 'intact' transgenic clones for biological analysis with a single experiment.

L19 ANSWER 9 OF 75 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
ACCESSION NUMBER: 1996:311801 BIOSIS
DOCUMENT NUMBER: PREV199699034157
TITLE: Hematopoietic supportive functions of mouse bone marrow and fetal liver microenvironment: Dissection of granulocyte, B-lymphocyte, and hematopoietic progenitor support at the stroma cell clone level.
AUTHOR(S): Friedrich, Christof; Zausch, Elke; Sugrue, Stephen P.; Gutierrez-Ramos, Jose-Carlos (1)
CORPORATE SOURCE: (1) Cent. Blood Res., Harvard Med. Sch., 200 Longwood Ave., Boston, MA 02115 USA
SOURCE: Blood, (1996) Vol. 87, No. 11, pp. 4596-4606. ISSN: 0006-4971.
DOCUMENT TYPE: Article
LANGUAGE: English
AB We dissected the functions of the microenvironment of bone marrow (BM) and fetal liver (FL) at the cellular level by cloning individual stromal cells and characterizing their phenotypical and functional features. Stromal cell clones derived from FL are large in size (mean forward light scatter intensity (mFSC) of 450), express the surface antigen Thy-1 but not Sca-1 and 6 out of 6 are able to differentiate into fat accumulating adipocytes. BM derived stromal cell clones are either small (mFSC of 250) or large (mFSC of 450), express Sca1 but not Thy-1 and only 2 out of 7 differentiate towards adipocytes. Heterogeneity in terms of vascular adhesion molecule-1, intracellular adhesion molecule-1 and heat stable antigen expression was found among the different cell clones. Functional assays using long- and short-term cocultures of stromal and hematopoietic cells revealed: (1) the capacity of 8 out of 12 stromal cell clones to support the expansion of primitive hematopoietic progenitors (colony forming unit spleen day 12) more than 10 weeks. ***Fat*** accumulation but not expression of ***stem*** ***cell*** factor by stromal cells did correlate with this supportive function. (2) Better support of granulocyte maturation and proliferation by BM- compared to FL-derived stromal cell clones. However, stromal cell clones from both organs expressed macrophage-colony stimulating factor. (3) The ability of 4 out of 12 stromal cell clones (derived from both, FL and BM) to support the expansion of interleukin-7 dependent pre-B cells from the BM. Pre-B cell growth stimulating factor was not restricted to supporters. (4) Mutual exclusiveness of myeloid and lymphoid support in that a given stromal cell clone supported either pre B-cell or granulocyte expansion. Experiments comparing the support of BM- and FL-derived hematopoietic progenitors showed identical responses of late (B220+/c-kit-) but strikingly different responses of early (B220+/c-kit+) pre-B cells, revealing different proliferation requirements for FL- versus BM- derived early pre-B cells in ***vitro*** .

L19 ANSWER 10 OF 75 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
ACCESSION NUMBER: 1996:24777 BIOSIS
DOCUMENT NUMBER: PREV199698596912
TITLE: Experience with liposomal Amphotericin-B in 60 patients undergoing high-dose therapy and bone marrow or peripheral blood stem cell transplantation.
AUTHOR(S): Krueger, William (1); Stockschlaeder, Marcus; Ruessmann, Bettina; Berger, Carolina; Hoffknecht, Matthias; Sobottka, Ingo; Kohlschuetter, Brigitte; Kroschke, Gerd; Kroger, Nicolaus; Horstmann, Martin; Kbisch, Hartmut; Zander, Axel R.
CORPORATE SOURCE: (1) Knochenmarktransplantation, Abteilung Onkologie/Haematologie, Univ.-Krankenhaus Eppendorf, Martinstrasse 52, 20246 Hamburg Germany
SOURCE: British Journal of Haematology, (1995) Vol. 91, No. 3, pp. 684-690. ISSN: 0007-1048.
DOCUMENT TYPE: Article
LANGUAGE: English
AB 60 patients undergoing bone marrow or ***stem*** ***cell*** transplantation were treated with ***liposomal*** Amphotericin-B for documented or suspected mycosis. 34 patients had a prior course of conventional Amphotericin-B with the following adverse effects: increasing creatinine above 1.4 mg/dl (n = 17), increasing creatinine below 1.5 mg/dl (n = 9), no response (n = 6), and clinical side-effects (n = 4). Liposomal Amphotericin-B failed in 6/7 patients with ***culture*** -proven mycosis who died from infection with Aspergillus (n = 2) and Candida (n = 4), respectively. One patient with Candida lambica sepsis was cured. No patient with clinically or serologically suspected or diagnosed infection died from mycosis. Liposomal Amphotericin-B was well tolerated in 57 patients, even after side-effects of the conventional formulation. Adverse effects occurred in three cases, requiring the withdrawal of the drug in one patient. Due to toxic side-effects of the high-dose therapy and transplant-related complications, it was difficult to evaluate the influence of liposomal Amphotericin-B on laboratory parameters. Eight patients showed a decrease of creatinine levels, which had increased above normal values under preceding therapy with conventional Amphotericin-B. Liposomal Amphotericin-B is well tolerated in patients undergoing high-dose therapy and bone marrow transplantation. The efficacy of liposomal Amphotericin-B needs to be investigated in randomized studies in comparison with conventional Amphotericin-B.

L19 ANSWER 11 OF 75 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
ACCESSION NUMBER: 1995:86522 BIOSIS
DOCUMENT NUMBER: PREV199598100822
TITLE: Establishment of an adherent cell feeder layer from human umbilical cord blood for support of long-term hematopoietic progenitor cell growth.
AUTHOR(S): Ye, Z.-Q.; Burkholder, J. K.; Qiu, P.; Schultz, J. C.; Shahidi, N. T. (1); Yang, N.-S.
CORPORATE SOURCE: (1) Hematol./Oncol. Div., Dep. Pediatr., Univ. Wisconsin, Madison, WI 53792 USA
SOURCE: Proceedings of the National Academy of Sciences of the United States of America, (1994) Vol. 91, No. 25, pp. 12140-12144. ISSN: 0027-8424.
DOCUMENT TYPE: Article
LANGUAGE: English
AB Previous attempts to establish a stromal cell feeder layer from human umbilical cord blood (HUCB) have met with very limited success. It has been suggested that there is an insufficient number of stromal precursor cells in HUCB to form a hematopoietic-supporting feeder layer in primary ***cultures*** . The present study shows that HUCB does contain a significant accessory cell population that routinely develops into a confluent, adherent cell layer under defined primary ***culture*** conditions. HUCB-derived adherent layers were shown to support long-term hematopoietic activity for an average of 4 months. This was achieved by using a customized coverslip with a modified surface structure as the cell attachment substratum and using a specialized ***culture*** feeding regime. We have characterized the various cell types (including fibroblasts, macrophages, and endothelial cells) and extracellular matrix proteins (including fibronectin, collagen III, and laminin) that were present in abundance in the HUCB-derived adherent cell layer. In contrast, oil red O-staining ***fat*** cells were rarely detected. ELISA and bioassays showed that ***stem*** ***cell*** factor and interleukin 6 were produced by the HUCB stromal cell ***cultures*** , but interleukin 3 or granulocyte/macrophage colony-stimulating factor was not detected. Application of this hematopoietic ***culture*** system to transgenic and gene therapy studies of stem cells is discussed.

L19 ANSWER 12 OF 75 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
ACCESSION NUMBER: 1995:79123 BIOSIS
DOCUMENT NUMBER: PREV199598093423
TITLE: Proliferation and differentiation of midgut epithelial cells from Manduca sexta, in ***vitro*** .
AUTHOR(S): Sadrud-Din, S. Y. (1); Hakim, R. S. (1); Loeb, M.
CORPORATE SOURCE: (1) Dep. Anatomy, Coll. Med., Howard Univ., Washington, DC 20059 USA
SOURCE: Invertebrate Reproduction and Development, (1994) Vol. 26, No. 3, pp. 197-204.

ISSN: 0792-4259.
DOCUMENT TYPE: Article
LANGUAGE: English
AB We have developed an insect midgut primary cell ***culture*** from pharate fourth instar larvae of Manduca sexta. An enriched Grace's medium supplemented with pupal ***fat*** body from Lymantria dispar and 20-hydroxyecdysone (20HE) supported ***stem*** ***cell*** proliferation and differentiation and maintained larval columnar and goblet cell morphology. Cell kinetics indicate that stem cells differentiate to columnar and goblet cells in ***culture*** .

L19 ANSWER 13 OF 75 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
ACCESSION NUMBER: 1994:12941 BIOSIS
DOCUMENT NUMBER: PREV199497025941
TITLE: Pluripotent mesenchymal stem cells reside within avian connective tissue matrices.
AUTHOR(S): Young, H. E.; Ceballos, E. M.; Smith, J. C.; Mancini, M. L.; Wright, R. P.; Ragan, B. L.; Bushell, Ian; Lucas, P. A.
CORPORATE SOURCE: Div. Basic Med. Sci., Mercer Univ. Sch., Med., 1550 College St., Macon, Georgia 31207 USA
SOURCE: In Vitro Cellular & Developmental Biology, (1993) Vol. 29A, No. 9, pp. 723-736.
ISSN: 0883-8364.
DOCUMENT TYPE: Article
LANGUAGE: English
AB Recent studies have noted the presence of putative stem cells derived from the connective tissues associated with skeletal muscle, heart, and dermis. Long-term continuous ***cultures*** of these cells from each tissue demonstrated five distinct phenotypes of mesodermal origin, i.e. muscle, fat, cartilage, bone, and connective tissue. Clonal analysis was performed to determine whether these morphologies were the result of a mixed population of lineage-committed stem cells or the differentiation of pluripotent stem cells or both. Putative stem cells from four tissues (skeletal muscle, dermis, atria, and ventricle) were isolated and cloned. Combined, 1158 clones were generated from the initial cloning and two subsequent subclonings. Plating efficiency approximated 5.8%. Approximately 70% of the 1158 clones displayed a pure stellate morphology, while the remaining clones contained a mixture of stellate, chondrogenic- or osteogenic-like morphologies or both. When ***cultured*** in the presence o dexamethasone, cells from all clones differentiated in a time- and concentration-dependent manner into muscle, ***fat*** , cartilage, and bone. These results suggest that pluripotent mesenchymal ***stem*** ***cells*** are present within the connective tissues of skeletal muscle, dermis and heart and may prove useful for studies concerning the regulation of stem cell differentiation, wound healing, and tissue restoration, replacement and repair.

L19 ANSWER 14 OF 75 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
ACCESSION NUMBER: 1992:390562 BIOSIS
DOCUMENT NUMBER: BA94:62737
TITLE: GENERATION AND FUNCTIONAL CHARACTERIZATION OF OVINE BONE MARROW-DERIVED MACROPHAGES.
AUTHOR(S): FRANCEY T; SCHALCH L; BRCIC M; PETERHANS E; JUNGI T W
CORPORATE SOURCE: INSTITUTE VETERINARY VIROLOGY, UNIVERSITY BERNE, LANGGASS-STR. 122, CH-3012 BERNE, SWITZ.
SOURCE: VET IMMUNOL IMMUNOPATHOL, (1992) 32 (3-4), 281-301.
CODEN: VIIMDS. ISSN: 0165-2427.
FILE SEGMENT: BA; OLD
LANGUAGE: English
AB A method for the ***culturing*** and propagation of ovine bone marrow-derived macrophages (BMM) in ***vitro*** is described. Bone marrow cells from sterna of freshly slaughtered sheep were ***cultured*** in hydrophobic (teflon foil) bags in the presence of high serum concentrations (20% autologous serum and 20% fetal calf serum). During an 18 day ***culture*** period in the absence of added conditioned medium, and without medium change, a strong enrichment of mononuclear phagocytes was achieved. Whereas the number of macrophages increased four to fivefold during this time, granulocytes, lymphoid cells, stem cells and undifferentiated progenitor cells were reduced to <3% of their numbers at Day 0. This resulted in BMM populations of 94 .+-. 3% purity. These cells had morphological and histochemical characteristics of differentiated macrophages, and they performed functions similar to those of non-activated, unprimed human monocyte-derived macrophages. Thus, they avidly ingested erythrocytes coated with IgG of heterologous or homologous origin. They expressed a modest level of procoagulant activity, but upon triggering with lipopolysaccharide (LPS), a marked increase in cell-associated procoagulant activity was observed. LPS triggering promoted the secretion of interleukin-1, as evidenced by measurement of murine thymocyte costimulatory activity, and transforming growth factor-.beta.. Using the mouse L929 cell cytotoxicity assay as an indication of tumor necrosis factor (TNF) activity, no TNF activity was detected in the same supernatants, a result possibly due to species restriction. BMM generated low levels of O2- upon triggering with phorbol 12-myristate 13-acetate (PMA). On the other hand, no O2- production was observed upon stimulation with zymosan opsonized with ovine or human serum. Using luminol-enhanced chemiluminescence (CL) as a more sensitive indicator of an oxidative burst, both PMA or zymosan were able to trigger CL, but the response was subject to partial inhibition by sodium azide, an inhibitor of myeloperoxidase. This points to non-macrophage cells contributing also to the CL response, and is consistent with the view that unprimed BMM elicit a low oxidative burst upon triggering with strong inducers of a burst. Our functional characterization now allows us to apply priming and activation protocols and to relate their effect to functional alterations.

L19 ANSWER 15 OF 75 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
ACCESSION NUMBER: 1991:271575 BIOSIS
DOCUMENT NUMBER: BA92:4190
TITLE: ESTABLISHMENT OF A SARCOMA CELL LINE MS-K EXPRESSING KI-RAS PROTO-ONCOGENE PRODUCT FROM MOUSE BONE MARROW STROMAL CELLS.
AUTHOR(S): SHIRATA K; SUZUKI T; YANAIHARA N; SUGIMOTO K; MORI K J
CORPORATE SOURCE: DEP. BIOL., FAC. SCI., NIIGATA UNIV., NIIGATA 950-21.
SOURCE: BIOMED PHARMACOTHER, (1991) 45 (1), 1-8.
CODEN: BIPHEX. ISSN: 0753-3322.
FILE SEGMENT: BA; OLD
LANGUAGE: English
AB A sarcoma cell line, MS-K, was established from a long-term ***culture*** of mouse bone marrow stromal cellsk. When inoculated into syngeneic 3HC/HeNS1c mcie, the cells formed large necrosis-free tumors, but there were no apparent changes in hematological features or in general conditions of tumor-bearing mice. The tumor had a fibroblastic appearance, was well vasculated and differentiated into adipocytes at the peripheral region. Immunohistochemical studies revealed that the cells were positive for vimentin and S-100 protein, indicating that the cells were of lipoblast origin. A significant amount of fat-deposition was induced in the cytoplasm of the cells when MS-K cells were ***cultured*** in the presence of hydrocortisone and insulin. Antibody-staining for oncogene products showed that the cells were negative for c-fos but strongly positive for Ki-ras. MS-K cells did not adhere hemopoietic stem cells are support their proliferation, which contrasts with previously established MS-1, which is a hemopoietic-supportive and ***stem*** ***cell*** -adherent ***lipoblast*** cell line. These properties of MS-K and MS-1 should be useful in the identification of the surface structures for stem cell anchorage.

L19 ANSWER 16 OF 75 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
ACCESSION NUMBER: 1989:472947 BIOSIS
DOCUMENT NUMBER: BA88:108707

TITLE: REGULATION OF MURINE HEMATOPOIESIS BY ARACHIDONIC ACID METABOLITES.
AUTHOR(S): VORE S J; ELING T E; DANILOWICZ R M; TUCKER A N; LUSTER M I
CORPORATE SOURCE: SYSTEMIC TOXICOLOGY BRANCH AND LAB. MOLECULAR BIOPHYSICA, NATL. INST. ENVIRON. HEALTH SCI., P. O. BOX 12233, RES. TRIANGLE PARK, NC 27709.
SOURCE: INT J IMMUNOPHARMACOL, (1989) 11 (5), 435-442. CODEN: IJIMDS. ISSN: 0192-0561.
FILE SEGMENT: BA; OLD
LANGUAGE: English
AB Arachidonic acid metabolites have been shown to exert a variety of regulatory effects on cellular activation and proliferation. Recently, a role for these products as regulators of hematopoiesis was suggested and evidence provided that products of the lipoxygenase pathway, specific leukotrienes, are essential for human myeloid colony formation in ***vitro*** . In this report the broader role of these metabolites in hematopoiesis was examined using murine bone marrow stem cell assays for both myeloid and lymphoid cell lines. The effects of ***lipoxygenase*** and/or cyclooxygenase pathway inhibitors on ***stem*** ***cell*** colony formation were evaluated and compared to qualitative and quantitative changes in arachidonic acid metabolism that occurred in similarly treated bone marrow cell ***cultures*** . Interruption of the lipoxgyenase pathway by esculetin or nordihydroguaiaretic acid resulted in decrease colony formation in both lymphoid and myeloid stem cells. This inhibition of colony growth was partly reversed by the addition of leukotrienes and was particularly evident in B-cell progenitor ***cultures*** to which was added LTB4. Inhibition of the cycloxygenase pathway by indomethacin or ibuprofen had a slight stimulatory effect on myeloid clonly formation, while slightly inhibiting the formation of lymphoid colonies. These results support a direct role for ***lipoxygenase*** products in myeloid colony formation and lymphoid ***stem*** ***cell*** proliferation. A more complex role for cyclooxygenase metabolites in the hematopoietic process appears probable.

L19 ANSWER 17 OF 75 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
ACCESSION NUMBER: 1989:358116 BIOSIS
DOCUMENT NUMBER: BA88:50230
TITLE: MODULATION OF MACROPHAGE IA EXPRESSION BY ***LIPOPOLYSACCHARIDE*** ***STEM*** ***CELL*** REQUIREMENTS ACCESSORY LYMPHOCYTE INVOLVEMENT AND IA-INDUCING FACTOR PRODUCTION.
AUTHOR(S): WENTWORTH P A; ZIEGLER H K
CORPORATE SOURCE: DEP. MICROBIOL. IMMUNOL., EMORY UNIV. SCH. MED., ATLANTA, GA. 30322, USA.
SOURCE: INFECT IMMUN, (1989) 57 (7), 2028-2036. CODEN: INFIBR. ISSN: 0019-9567.
FILE SEGMENT: BA; OLD
LANGUAGE: English
AB The mechanism of induction of murine macrophage Ia expression by lipopolysaccharide (LPS) was studied. Intraperitoneal injection of 1 .mu.g of LPS resulted in a 3- to 10-fold increase in the number of IA-positive peritoneal macrophage (flow cytometry and immunofluorescence) and a 6- to 16-fold increase by radioimmunoassay. The isolated lipid A moiety of LPS was a potent inducer of macrophage Ia expression. Ia induction required a functional myelopoietic system as indicated by the finding that the response to LPS was eliminated in irradiated (9000 rads) mice and reinstated by reconstitution with bone marrow cells. Comparison of LPS-induced Ia expression in normal and LPS-primed mice revealed a faster secondary response to LPS. The memory response could be adoptively transferred to normal mice with nonadherent spleen cells prepared 60 days after LPS injection. Spleen cells prepared 5 days after LPS injection caused Ia induction in LPS-nonresponder mice; such inductions was not observed in irradiated (900 rads) recipients. The cells responsible for this phenomenon was identified as a Thy-1+, immunoglobulin-negative nonadherent cell. The biosynthesis and expression of Ia were not increased by direct exposure of macrophages to LPS in ***vitro*** . Small amounts of LPS inhibited Ia induction by gamma interferon. LPS showed positive regulatory effects on Ia expression by delaying the loss of Ia expression on ***cultured*** macrophages and by stimulating the production of Ia-inducing factors. Supernatants from ***cultured*** spleen cell stimulated with LPS in ***vitro*** contained antiviral and Ia-inducing activity that was acid labile, indicating that the active factor is gamma interferon. We conclude that induction of Ia expression by LPS in vivo is a bone-marrow-dependent, radiation-sensitive process which involves the stimulation of a gamma interferon-producing accessory lymphocyte and a delay in Ia turnover.

L19 ANSWER 18 OF 75 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
ACCESSION NUMBER: 1989:267358 BIOSIS
DOCUMENT NUMBER: BA88:3440
TITLE: URDAMYCINS NEW ANGUCYCLINE ANTIBIOTICS FROM STREPTOMYCES-FRADIAE V. DERIVATIVES OF URDAMYCIN A.
AUTHOR(S): HENKEL T; CIESIOLKA T; ROHR J; ZEECK A
CORPORATE SOURCE: INST. FUER ORGANISCHE CHEMIE, UNIV. GOTTINGEN, TAMMANNSTR. 2, D-3400 GOTTINGEN, FRG.
SOURCE: J ANTIBIOT (TOKYO), (1989) 42 (2), 299-311. CODEN: JANTAJ. ISSN: 0021-8820.
FILE SEGMENT: BA; OLD
LANGUAGE: English
AB Derivatives of the angucycline urdamycin A (1) were prepared in order to study structure-activity relationships in this group of antitumor antibiotics. Derivatives of 1 formed by methanolysis, O-acylation, hydrogenation and treatment with diazomethane were isolated from and characterized by their spectroscopic data. Urdamycin G(20) were isolated from Streptomyces fradiae by shortening the fermentation time. The different glycosidation pattern of the aglycone 14 did not lead to significant differences in the biological activity. O-Acylation was shown to enhance the in ***vitro*** activity of 1 against ***stem*** ***cells*** of murine L1210 leukemia depending on ***lipophilicity*** of the molecules. The importance of the 5,6-double bond of 1 with regard to the antitumor activities is discussed.

L19 ANSWER 19 OF 75 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
ACCESSION NUMBER: 1989:220198 BIOSIS
DOCUMENT NUMBER: BA87:111815
TITLE: IN- ***VITRO*** EFFECTS OF RECOMBINANT INTERLEUKIN 7 ON GROWTH AND DIFFERENTIATION OF BONE MARROW PRO-B AND PRO-T-LYMPHOCYTE CLONES AND FETAL THYMOCYTE CLONES.
AUTHOR(S): TAKEDA S; GILLIS S; PALACIOS R
CORPORATE SOURCE: BASEL INST. IMMUNOL., GRENZACHERSTRASSE 487, 4058 BASEL, SWITZERLAND.
SOURCE: PROC NATL ACAD SCI U S A, (1989) 86 (5), 1634-1638. CODEN: PNASA6. ISSN: 0027-8424.
FILE SEGMENT: BA; OLD
LANGUAGE: English
AB We have studied the effects of recombinant (r) interleukin 7 (IL-7) on growth and differentiation of marrow pro-B-lymphocyte clones (CB/Bm7, LyD9, LyB9), marrow pro-T-lymphocyte clones (C4-77/3, C4-86/18, C4-95/16), and fetal thymocyte clones (FTH5, FTA2, FTD5) in the presence or absence of the bone marrow stroma clone RP.0.10, which was selected for its ability to promote differentiation of the pro-B clones. rIL-7 alone stimulated some DNA synthesis (measured by [3H]thymidine uptake) but not actual growth (increase in cell number) of the pro-B clones. Antibodies against IL-4 and IL-6 or against receptors for IL-2, IL-3, and IL-5 did

not inhibit this effect of rIL-7 on the pro-B clones. rIL-7 alone or in various combinations with other cytokines (from rIL-1.alpha. to rIL-6) could not induce differentiation of the pro-B clones into IgM+B cells regardless of the presence of lipopolysaccharide (LPS). The RP.0.10 marrow stroma cells by themselves do not support the growth of the pro-B clones. However, the pro-B clones grew when ***cultured*** with rIL-7 and monolayers of the RP.0.10 stroma cells. While the RP.0.10 stroma cells induced the pro-B clones to differentiate into IgM+ B cells but not T3+ T cells when ***cultured*** in the presence of LPS and rIL-3, the B-cell progenitor clones gave rise to significantly higher numbers of IgM+ B cells (up to 63%) and to many more B cells expressing higher levels of surface IgM when cocultured with rIL-7, LPS, and RP.0.10 stroma cells. The pro-B clones also generated IgM+ B cells (up to 20%) when cocultured with RP.0.10 stroma cells and rIL-7 in the absence of LPS. By using ***culture*** plates designed for testing requirements for cell-cell contact, we found that cell interactions between the pro-B cell and the marrow stroma cell are essential to induce rearrangement and expression of the immunoglobulin genes in the pro-B clones. Possible mechanisms to account for the remarkable effects of rIL-7 in the presence of RP.0.10 stroma cells on both growth and differentiation of the pro-B clones are discussed. Finally, rIL-7 alone or together with RP.0.10 stroma cells neither supported proliferation nor induced differentiation into T3+ T cells or IgM+ B cells of the marrow pro-T clones or the fetal thymocyte clones. In light of these findings, we postulate that the interaction of the pluripotential stem cell with marrow stroma cells like RP.0.10 and the availability of IL-7 could play a critical role in the commitment to develop along the B-lymphocyte pathway.

L19 ANSWER 20 OF 75 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
ACCESSION NUMBER: 1989:26369 BIOSIS
DOCUMENT NUMBER: BA87:14369
TITLE: INDUCTION OF AMP-DEPENDENT PROTEIN KINASE SUBUNITS DURING ADIPOGENESIS IN- ***VITRO*** .
AUTHOR(S): KURTEN R C; NAVRE M; GADDY-KURTEN D; SEMENKOVICH C F; RINGOLD G M; CHAN L; RICHARDS J S
CORPORATE SOURCE: DEP. CELL BIOL., BAYLOR COLL. MED., HOUSTON, TEX. 77030.
SOURCE: ENDOCRINOLOGY, (1988) 123 (5), 2408-2418. CODEN: ENDOAO. ISSN: 0013-7227.
FILE SEGMENT: BA; OLD
LANGUAGE: English
AB Fatty acid metabolism in adipocytes is known to be regulated by the intracellular transducer cAMP. This study was taken to determine the temporal and hormonal regulation of cAMP-dependent protein kinase during the differentiation of preadipocyte mesenchymal cells to adipocytes. For this we have used a stable cell line (TA1) in which the undifferentiated preadipocyte acquires adipocyte functions and morphology after growth to confluence. We observed that synthesis of type I and II cAMP-dependent protein kinases was induced during the adipogenic conversion of growth-arrested TA1 cells. In preconfluent cells, neither mRNAs encoding regulatory subunits (RI, RII.beta.) and catalytic subunit (C.alpha.) nor the peptides themselves were detectable. Within several days of growth arrest at high cell density, mRNAs for RI, RII.alpha. and C.alpha. were detectable in total RNA extracted from cell populations. The subunits themselves were detectable in some, but not all, of the cells by indirect immunofluorescence. Immunoblotting of cytosolic extracts indicated the RI and that .beta.-isoform of RII (mol wt = 52,000) were expressed in these cells. Analysis of subunit presence or absence in single cells by immunofluorescence also indicated that kinase subunit expression preceded the accumulation of lipid droplets within the cells. Further, the subunits were predominantly associated with a reticular cytoplasmic structure (Golgi apparatus?) abutting the nucleus. Conversion of TA1 cells to adipocytes can be accelerated by indomethacin (125 .mu.M) or dexamethasone (1 .mu.M) treatment, compounds that also enhanced the accumulation of RII.beta. and C.alpha. mRNAs. Within 2-3 days of addition of indomethacin to confluent ***cultures*** , RII.beta. message content is increased about 20-fold, and protein content is increased about 5-fold relative to those in untreated ***cultures*** . C.alpha. mRNA content is increased about 5-fold relative to that in untreated cells. The response to dexamethasone requires 6-7 days, and changes in RII.beta. message levels were the most pronounced. We also observed the induction of mRNAs for the functionally relevant mRNA lipoprotein lipase in indomethacin-treated cells. In addition to this apparent transcriptional regulation of kinase subunit expression, we provide evidence for regulation at the posttranscriptional level. Within a differentiated ***culture*** , there exist stem cells that can be selected, will repopulate the dish, and will again differentiate into adipocytes upon growth arrest at high cell density. In preconfluent populations of these stems cells, unlike the preconfluent TA1 cells originally plated, both RII.beta. and C.alpha. messages were present. However, the subunits themselves were not detectable until after growth arrest at confluence. Therefore, before confluence, kinase subunit messages either were not translated or the peptides themselves were rapidly degraded. During differentiation of these cells, the message content of RII.beta. and C.alpha. was increased by dexamethasone and indomethacin, as was observed for adipocytes derived from previously undifferentiated TA1 cells. We conclude that transcription of genes for RII.beta., RI and C.alpha. precedes morphological differentiation of adipocytes and can be regulated by conditions facilitating the differentiation process.

L19 ANSWER 21 OF 75 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
ACCESSION NUMBER: 1987:65719 BIOSIS
DOCUMENT NUMBER: BA83:34045
TITLE: COMPLEMENT SPLIT PRODUCT C-5A MEDIATES THE ***LIPOPOLYSACCHARIDE*** -INDUCED MOBILIZATION OF PLURIPOTENT HEMOPOIETIC ***STEM*** ***CELLS*** AND HEMOPOIETIC PROGENITOR CELLS BUT NOT THE MOBILIZATION INDUCED BY PROTEOLYTIC ENZYMES.
AUTHOR(S): MOLENDIJK W J; VAN OUDENAREN A; VAN DIJK H; DAHA M R; BENNER R
CORPORATE SOURCE: DEP. OF CELL BIOL., IMMUNOL. AND GENETICS, ERASMUS UNIV., P.O. BOX 1738, 3000 DR ROTTERDAM, THE NETHERLANDS.
SOURCE: CELL TISSUE KINET, (1986) 19 (4), 407-418. CODEN: CTKIAR. ISSN: 0008-8730.
FILE SEGMENT: BA; OLD
LANGUAGE: English
AB Intravenous (i.v.) injection of mice with lipopolysaccharide (LPS), and the proteolytic enzymes trypsin and proteinase, mobilizes pluripotent haemopoietic stem cells (CFU-s) as well as granulocyte-macrophage progenitor cells (GM-CFU) and the early progenitors of the erythroid lineage (E-BFU) from the haemopoietic tissues into the peripheral blood. We investigated the involvement of the complement (C) system in this process. It appeared that the early mobilization induced by LPS and other activators of the alternative complement pathway, such as Listeria monocytogenes (Lm) and zymosan, but not that induced by the proteolytic enzymes, was absent in C5-deficieint mice. The mobilization by C activators in these mice could be restored by injection of C5-sufficient serum, suggesting a critical role for C5. The manner in which C5 was involved in the C activation-mediated stem cell mobilization was studied using a serum transfer system. C5-sufficient serum, activated in ***vitro*** by incubation with Lm and subsequently libered from the bacteria, caused mobilization in both C5-sufficient and C5-deficient mice. C5-deficient serum was not able to do so. The resistance of the mobilizing principle to heat treatment (56.degree. C, 30 min) strongly suggests that it is identical with the C5 split product C5a, or an in vivo derivative of C5a. This conclusion was reinforced by the observation that a single injection of purified rat C5a into C5-deficient mice also induced mobilization of CFU-s.

L19 ANSWER 22 OF 75 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
ACCESSION NUMBER: 1985:284935 BIOSIS
DOCUMENT NUMBER: BA79:64931
TITLE: EFFECT OF SERUM FROM MICE TREATED WITH ***LIPOPOLYSACCHARIDE*** ON CYCLING OF

CFU-S
PLURIPOTENTIAL ***STEM*** ***CELL*** IN-***VITRO*** .
AUTHOR(S): MOLENDIJK W J; PLOEMACHER R E
CORPORATE SOURCE: DEPARTMENT OF CELL BIOLOGY AND GENETICS, ERASMUS
UNIVERSITY, P.O. BOX 1738, 3000 DR ROTTERDAM, NETHERLANDS.
SOURCE: EXP HEMATOL (N Y), (***1984 (RECD 1985)***) 12 (10),
794-799.
CODEN: EXHMA6. ISSN: 0301-472X.
FILE SEGMENT: BA; OLD
LANGUAGE: English
AB Serum of lipopolysaccharide(LPS)-treated LPS-high-responder C3H/He mice
was shown to increase survival of low-responder C3H/HeJ CFUs [spleen colony forming unit] in an otherwise serum-free suspension ***culture***
by initiating cell cycling. Post-LPS serum of low-responder mice and serum
of phosphate-buffered-saline-injected high-responder mice was significantly less effective in this respect. Since prolonged maintenance of CFUs was also found when cell suspensions highly enriched for stem cells were used, it seems unlikely that assessory cells mediated the effect of the post-LPS serum activity on CFUs maintenance. The serum activity did not enhance the stimulatory effect of saturating levels of highly purified stem-cell-activating factor (SAF) on CFUs maintenance in ***vitro*** . Upon injection of post-LPS serum from C3H/He mice a relatively small splenic CFUs accumulation in C3H/HeJ mice was observed.

L19 ANSWER 23 OF 75 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
ACCESSION NUMBER: 1984:320610 BIOSIS
DOCUMENT NUMBER: BA78:57090
TITLE: SPATIAL AND FUNCTIONAL RELATIONSHIPS BETWEEN HUMAN
HEMOPOIETIC AND MARROW STROMAL CELLS IN-***VITRO*** .
AUTHOR(S): GORDON M Y; GOLDMAN J M; GORDON-SMITH E C
CORPORATE SOURCE: DEP. OF HAEMATOL., ROYAL POSTGRADUATE MED. SCH., DU CANE
ROAD, LONDON, W12 0HS, GREAT BRITAIN.
SOURCE: INT J CELL CLONING, (***1983 (RECD 1984)***) 1 (6),
429-439.
CODEN: IJCCE3. ISSN: 0737-1454.
FILE SEGMENT: BA; OLD
LANGUAGE: English
AB Which stromal elements are important for the proliferation of human hemopoietic precursor cells were determined in ***vitro*** and a model
for human bone marrow transplantation was developed. Bone marrow mononuclear cells were incubated in liquid ***culture*** under different conditions obtained different proportions of fibroblasts, fat cells and macrophages. Persistent hemopoiesis in association with these stromal cells was looked for. Nonadherent bone marrow mononuclear cells
were seeded onto established stromal monolayers by incubating them together for 2 h and then washing off the unattached cells. The cells remaining on the monolayer were then stimulated by granulocyte-macrophage
colony-stimulating activity (GM-CSA). Persistent hemopoiesis was maintained only in the presence of fibroblasts, fat cell and macrophages. Hemopoietic precursor cells attached to monolayers containing fibroblasts and fat cells, but not to monolayers containing fibroblasts or macrophages alone. Fibroblasts, fat cells and macrophages appear to be necessary for the maintenance of human hemopoiesis in ***vitro*** , and ***fat*** cells may permit repopulation of marrow stroma by transplanted hemopoietic
stem ***cells*** . This in ***vitro*** model might reflect features of human bone marrow transplantation in vivo.

L19 ANSWER 24 OF 75 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
ACCESSION NUMBER: 1984:312374 BIOSIS
DOCUMENT NUMBER: BA78:48854
TITLE: A GRANULOCYTE COLONY STIMULATING FACTOR FROM SERUM-FREE
CULTURES OF RSP-2 P-3 CELLS ITS SEPARATION FROM A
MACROPHAGE COLONY STIMULATING FACTOR AND ITS BIOLOGICAL AND
MOLECULAR CHARACTERIZATION.
AUTHOR(S): TSUNEOKA K; SHIKITA M
CORPORATE SOURCE: NATL. INST. RADIOL. SCI., CHIBA-SHI 260, JPN.
SOURCE: CELL STRUCT FUNCT, (1984) 9 (1), 67-82.
CODEN: CSFUDY. ISSN: 0386-7196.
FILE SEGMENT: BA; OLD
LANGUAGE: English
AB A granulocyte colony-stimulating factor (G-CSF) was highly purified from
the serum-free ***culture*** medium of [rat] RSP-2.cntdot.P3 cells.
The G-CSF had an apparent MW of 33,000 as determined by high speed gel
permeation chromatography, but its MW was decreased to 15,000 by 0.1%
sodium dodecyl sulfate [SDS]. A small amount of monocyte/macrophage CSF
(M-CSF) also was separated from the same medium. The production of this
M-CSF was increased markedly by bacterial lipopolysaccharides. The M-CSF
had an apparent MW of 77,000 in the absence of 0.1% SDS and 49,000 in its
presence. The G-CSF was stable against 5 mM dithiothreitol, whereas the M-CSF was slowly inactivated. The 2 CSF also differed in their heat-stability and resistance to trypsin. Neuraminidase changed the isoelectric point of both CSF. Anti-L cell CSF serum severely inhibited the activity of M-CSF but not that of G-CSF. A 1:1 mixture of M-CSF and G-CSF developed colonies of the respective types, both in excess of the number predicted. The RSP-2.cntdot.P3 G-CSF reported here should prove
very useful in the study of differentiation in myeloid stem cells.

L19 ANSWER 25 OF 75 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
ACCESSION NUMBER: 1984:291107 BIOSIS
DOCUMENT NUMBER: BA78:27587
TITLE: DEFECTIVE MONOCYTE PRODUCTION OF AND T LYMPHOCYTE RESPONSE
TO INTERLEUKIN 1 IN THE PERIPHERAL BLOOD OF PATIENTS WITH
SYSTEMIC LUPUS ERYTHEMATOSUS.
AUTHOR(S): ALCOCER-VARELA J; LAFFON A; ALARCON-SEGOVIA D
CORPORATE SOURCE: INST. NACIONAL DE LA NUTRICION 'SALVADOR ZUBIRAN', VASCO DE
QUIROGA NO. 15, DELEGACION TLALPAN, MEXICO D.F. 14000,
MEXICO.
SOURCE: CLIN EXP IMMUNOL, (1984) 55 (1), 125-132.
CODEN: CEXIAL. ISSN: 0009-9104.
FILE SEGMENT: BA; OLD
LANGUAGE: English
AB Interleukin-1 (IL-1) is a monocyte product with diverse amplifying effects
on immune cell reactions. Untreated SLE [systemic lupus erythematosus] patients (16) were studied to determine the production of IL-1 by their monocytes under the stimulus of Escherichia coli lipopolysaccharide (LPS)
or phorbol myristate acetate (PMA) and measured by the capacity of their supernatants to augment normal autologous mixed lymphocyte
cultures (AMLR) or to replace accessory cells in Con A[concanavalin A]-induced proliferation of T lymphocytes. The response of
T lymphocytes from these same patients to IL-1 was studied by its capacity
to increase the percentage of stable E [erythrocyte] rosette forming cells and by the enhancement of T cell proliferation in AMLR. Monocytes from SLE
patients produced significantly less IL-1 activity than those of age matched controls, regardless of the stimulus (LPS or PMA), as well as of

the indicator system. All patients with active disease and 7 of the 10 patients with inactive disease had decreased production of IL-I activity as determined by at least 1 method. Response of T lymphocytes from SLE patients to IL-1 produced by normal monocytes was also found decreased as compared to normals. This defect was more marked in the T cells from patients with active than in those of patients with inactive disease. The immunoregulatory disturbance that SLE patients have encompasses monocytes as well as T and B lymphocytes and the defect is either multicentric or originates in the stem cell.

L19 ANSWER 26 OF 75 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
ACCESSION NUMBER: 1984:264230 BIOSIS
DOCUMENT NUMBER: BA78:710
TITLE: DEVELOPMENT OF BROWN FAT CELLS IN MONO LAYER ***CULTURE*** 2. ULTRASTRUCTURAL CHARACTERIZATION OF PRECURSORS DIFFERENTIATING ADIPOCYTES AND THEIR MITOCHONDRIA.
AUTHOR(S): NECHAD M
CORPORATE SOURCE: LAB. DE PHYSIOL. COMPAREE CNRS L.A. 307 , UNIV. P. ET M. CURIE, 4, PLACE JUSSIEU, 75230, PARIS, FR.
SOURCE: EXP CELL RES, (1983) 149 (1), 119-128. CODEN: ECREAL. ISSN: 0014-4827.
FILE SEGMENT: BA; OLD
LANGUAGE: English
AB The stroma of mature brown fat contains cells which can proliferate and accumulate fat in monolayer ***cultures*** , and which have inherent characteristics distinct from those of white fat precursor cells. These brown fat cells and their subsequent development when they were grown in ***vitro*** were characterized by EM analysis. By comparison with the existing ultrastructural data on brown fat in situ, it could be determined whether or not the precursor cells have the capacity to differentiate in ***culture*** . The stromal-vascular fraction isolated from the brown ***fat*** of weaned rats was identified as containing adipocyte ***stem*** ***cells*** , preadipocytes, endothelial cells and a few mature adipocytes. During the 1st wk in ***culture*** (i.e., growth phase to confluence), when multilocular fat accumulation occurred, the mitochondria of the preadipocytes developed cristae and matrix granules, as they do in differentiating brown fat in situ. Such granules were a sign of intense inner membrane synthetic activity. After confluence, the mitochondria regressed in internal structure and became morphologically more similar to white fat mitochondria. Mature brown fat contains precursor cells which can differentiate in ***vitro*** . This differentiation was incomplete, and the necessity of specific factors for a full mitochondrial development in brown fat is discussed.

L19 ANSWER 27 OF 75 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
ACCESSION NUMBER: 1984:185278 BIOSIS
DOCUMENT NUMBER: BA77:18262
TITLE: HORMONAL REQUIREMENTS FOR GROWTH AND DIFFERENTIATION OF OB-17 PRE ADIPOCYTE CELLS IN- ***VITRO*** .
AUTHOR(S): AILHAUD G; AMRI E; CERMOLACCE C; DJIAN P; FOREST C; GAILLARD D; GRIMALDI P; KHOO J; NEGREL R; ET AL
CORPORATE SOURCE: CENTRE BIOCHIMIE, FAC. SCI., PARC VALROSE, 06034 NICE CEDEX, FR.
SOURCE: DIABETE METAB, (1983) 9 (2), 125-133. CODEN: DIMEDU. ISSN: 0338-1684.
FILE SEGMENT: BA; OLD
LANGUAGE: English
AB The ob17 cell line is a clonal line established from epididymal fat pads of c57 BL/6J ob/ob mice. After conversion into adipose-like cells, ob17 presents both the morphological and biochemical properties of mature rodent fat cells. The adipose conversion process is best represented by a stochastic model in which a pool of ***stem*** ***cells*** (adipoblasts) gives rise to clusters of ***adipose*** cells and to additional ***stem*** ***cells*** that remain in the population. The role of the different factors involved in the adipose conversion process of ob17 cells is discussed, i.e. mitogenic factors, that enhance the number of committed cells (ACF or adipose conversion factor(s)), lipogenic factors, that enhance the expression of adipocyte enzyme markers (insulin) and adipogenic factors that are obligatory requirements for adipose conversion (triiodothyronine, growth hormone and other pituitary factors).

L19 ANSWER 28 OF 75 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
ACCESSION NUMBER: 1983:307397 BIOSIS
DOCUMENT NUMBER: BA76:64889
TITLE: MIGRATION INHIBITORY ACTION OF BACTERIAL LIPO POLY SACCHARIDE ON PROGENITOR CELLS OF MONOCYTE MACROPHAGE LINEAGE GROWING IN ***CULTURE*** IN THE PRESENCE OF COLONY STIMULATING FACTOR CSF-I.
AUTHOR(S): ISHII Y; SHINODA M; SHIKITA M
CORPORATE SOURCE: NATL. INST. RADIOLOGICAL SCI., ANAGAWA, CHIBA-SHI 260, JPN.
SOURCE: J CELL PHYSIOL, (1982) 113 (1), 80-86. CODEN: JCLLAX. ISSN: 0021-9541.
FILE SEGMENT: BA; OLD
LANGUAGE: English
AB Addition of ***lipopolysaccharide*** (LPS) to the ***culture*** of mouse myeloid ***stem*** ***cells*** (CFUc) increased the incidence of compact colonies and decreased that of dispersed ones in the presence of colony-stimulating factor (CSF-1); CSF-1 did not have such an effect by itself, even in high concentrations. Although colony morphology was thus changed, nearly all colonies were composed of monocytes. The incidence of compact colonies increased with the increase of LPS concentration but plateaued at .apprx. 50%. Bone marrow cells of LPS-tolerant mice responded to LPS in ***vitro*** to a slightly decreased extent. The activity of LPS was decreased by alkaline or acid hydrolysis of the LPS molecule and inhibited by polymyxin B, but not by indomethacin, .alpha.-L-fucose, or .alpha.-methyl-D-mannoside. Other immunopotentiating substances, such as OK-432, lentinan and levamisole, had no effect on the colony morphology. Muramyl dipeptide and poly(I).cntdot.poly(C) were also ineffective. The action of LPS was not abolished by the use of heat-inactivated serum in the ***culture*** . LPS was no longer stimulative for the induction of lysosomal enzymes in the CSF-stimulated ***culture*** , although it greatly enhanced the enzyme induction in the unstimulated ***culture*** . Thus, cells of monocyte/macrophage lineage evidently develop the capacity for migration before they become responsive to LPS and the LPS-responding monocytic cells can proliferate even in a state of confluence induced by LPS.

L19 ANSWER 29 OF 75 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
ACCESSION NUMBER: 1983:158268 BIOSIS
DOCUMENT NUMBER: BA75:8268
TITLE: CHARACTERIZATION OF MARROW DERIVED ADHERENT CELLS EVIDENCE AGAINST AN ENDOTHELIAL SUB POPULATION.
AUTHOR(S): BENTLEY S A; TRALKA T S
CORPORATE SOURCE: LAB. HEMATOL. SCH. MED., UNIV. N.C., CHAPEL HILL, N.C. 27514, USA.
SOURCE: SCAND J HAEMATOL, (1982) 28 (5), 381-388. CODEN: SJHAAQ. ISSN: 0036-553X.
FILE SEGMENT: BA; OLD
LANGUAGE: English
AB ***Cultured*** [mouse] marrow-derived, adherent cells (MDAC) provided a microenvironment which supported the proliferation of hemopoietic stem cells (HSC) for extended periods in ***vitro*** . Morphological characterization suggested that MDAC populations consisted of a variety of cell types, including mononuclear phagocytes, fibroblastoid cells, fat cells and vascular endothelial cells. They apparently consist largely of collagen-producing, fibroblastic cells. MDAC were not examined systematically for endothelial cell characteristics. Unrecharged

cultures of MDAC, shown in parallel studies to support in ***vitro*** hemopoiesis, were examined for endothelial cell markers. These included the presence of Weibel-Palade bodies and synthesis of factor VIII-related antigen. They were also examined biochemically for synthesis of basement membrane (type IV) collagen. The results of these investigations were negative in all ***cultures*** examined. Apparently, vascular endothelial cells are not present as a significant component of the unrecharged MDAC population and do not contribute to the functional hemopoietic microenvironment in ***vitro*** or in vivo.

L19 ANSWER 30 OF 75 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
ACCESSION NUMBER: 1982:235490 BIOSIS
DOCUMENT NUMBER: BA74:7970
TITLE: IN-VIVO DEVELOPMENT OF ADIPOSE TISSUE FOLLOWING
IMPLANTATION OF LIPID DEPLETED ***CULTURED***
ADIPOCYTE.
AUTHOR(S): TAVASSOLI M
CORPORATE SOURCE: VETERAN ADM. HOSP., UNIV. MISS. SCH. MED., JACKSON, MISS.
39216, USA.
SOURCE: EXP CELL RES, (1982) 137 (1), 55-62.
CODEN: ECREAL. ISSN: 0014-4827.
FILE SEGMENT: BA; OLD
LANGUAGE: English
AB The monolayer ***culture*** of isolated and disaggregated adipocytes from rat omental and perirenal sites, gave rise to a population of fibroblast-like cells, usually devoid of lipid inclusion. Similar fibroblast-like cells were obtained in ***cultures*** of ***adipose*** tissue stromal cells and are thought to be undifferentiated adipocyte ***stem*** ***cells*** . Although the adipocyte-derived fibroblasts were morphologically indistinguishable from ***culture*** -derived fibroblasts of other origins, upon autoimplantation into the splenic bed they regained the lipid inclusion and developed again into adipose tissue. The transformation of adipose cells into fibroblast-like cells is evidently reversible modulation and not a dedifferentiation into the ***adipose*** tissue ***stem*** ***cell*** . This work also substantiates the increasingly recognized heterogeneity of fibroblasts.

L19 ANSWER 31 OF 75 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
ACCESSION NUMBER: 1981:215636 BIOSIS
DOCUMENT NUMBER: BA72:620
TITLE: SOME PROPERTIES OF MARROW DERIVED ADHERENT CELLS IN TISSUE
CULTURE .
AUTHOR(S): BENTLEY S A; FOIDART J-M
CORPORATE SOURCE: NIH, BLDG. 10, RM. 1A21, 9000 ROCKVILLE PIKE, BETHESDA, MD.
20205.
SOURCE: BLOOD, (***1980 (RECD 1981)***) 56 (6), 1006-1012.
CODEN: BLOOAW. ISSN: 0006-4971.
FILE SEGMENT: BA; OLD
LANGUAGE: English
AB Monolayer ***cultures*** of marrow derived adherent cells (MDAC), apparently consisting of fibroblasts, macrophages, epithelioid cells and ***fat*** cells, can support long-term ***stem*** ***cell*** proliferation in ***vitro*** . The hematopoietic support capability of murine MDAC monolayers was confirmed and the ***cultured*** cells further characterized with respect to the following properties: esterase I activity, complement component 3 (C3) receptors, IgG (Fc) receptors, colony stimulating activity (CSA) production, and collagen synthesis. The ***cultures*** were also examined immunohistochemically to localize fibronectin, laminin and collagen synthesis and to identify the collagen subtypes synthesized. MDAC morphology was as described in previous studies, although fat cells were few in number. MDAC included some cells with esterase I activity and C3 receptors. Fc receptors were not detected and the ***cultures*** did not produce CSA, indicating that mononuclear phagocytes were not present. MDAC synthesized fibronectin and collagen types I and III. Staining for epithelial basement membrane proteins (collagen types IV and V and laminin) was negative. The vast majority of these ***cultured*** MDAC were apparently fibroblasts.

L19 ANSWER 32 OF 75 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
ACCESSION NUMBER: 1981:194307 BIOSIS
DOCUMENT NUMBER: BA71:64299
TITLE: DIFFERENT TYPES OF ENDO TOXIN INDUCED RELEASE OF COLONY
STIMULATING FACTORS BY ADHERENT LEUKOCYTES IN THE PRESENCE
OF FRESH AND HEAT INACTIVATED AUTOLOGOUS SERUM.
AUTHOR(S): HINTERBERGER W; MITTERMAYER K; PAUKOVITS W; SINGER J
CORPORATE SOURCE: FIRST DEP. MED., UNIV. VIENNA, A-1090, LAZARETTEGASSE 14,
AUSTRIA.
SOURCE: SCAND J HAEMATOL, (1980) 25 (3), 221-225.
CODEN: SJHAAQ. ISSN: 0036-553X.
FILE SEGMENT: BA; OLD
LANGUAGE: English
AB Human adherent leukocytes stimulate in ***vitro*** granulopoiesis by releasing colony stimulating factors (CSF), which promote the growth of myeloid committed ***stem*** ***cells*** (CFUC). The effect of ***lipopolysaccharide*** (LPS) on CSF generation by adherent leukocytes was studied with fresh and heat-inactivated autologous serum. Adherent leukocyte conditioned media were fractionated on Sephadex G-75. LPS in the presence of fresh serum caused a significant increase of CSF release by adherent leukocytes within 1 h. Heat inactivation of autologous serum abolished this effect. Adherent leukocyte CSF had 3 activity peaks at > 75,000, 23,000 and < 4000 daltons. LPS-fresh serum initiated CSF, harvested after ***culture*** periods of 1 and 24 h, disclosed identical elution profiles.

L19 ANSWER 33 OF 75 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
ACCESSION NUMBER: 1981:189950 BIOSIS
DOCUMENT NUMBER: BA71:59942
TITLE: IMMUNE SYSTEM OF THE W-W-V MICE FUNCTIONAL STUDIES.
AUTHOR(S): WIKTOR-JEDRZEJCZAK W; AHMED A; SZCZYLIK C; SHARKIS S J;
SELL K W; SIEKIERZYNSKI M
CORPORATE SOURCE: LAB. RADIATION IMMUNOHAEMATOL., POSTGRAD. CENT., MILITARY
SCH. MED. SZASEROW 128, 00-909 WARSAW.
SOURCE: BULL ACAD POL SCI SER SCI BIOL, (1980) 27 (11), 895-902.
CODEN: BAPBAN. ISSN: 0001-4087.
FILE SEGMENT: BA; OLD
LANGUAGE: English
AB W/Wv mice suffering from an inherited hemopoietic stem cell deficiency have decreased numbers of lymphoid cells in the thymus, bone marrow and peripheral blood, but not in the spleen. The response of splenocytes of these mice to concanavalin A was significantly increased; the response to poly(I)-poly(C) was significantly lowered as compared to normal littermate controls but still in the range of normal strain response. The responses to phytohemagglutinin, pokeweed mitogen, lipopolysaccharide and purified protein derivative of tuberculin were normal as were the response to allogeneic stimulator cells in the mixed lymphocyte ***cultures*** , and the direct plaque-forming cell response to sheep red blood cells and DNP-lys[dinitrophenylated-lysyl]-Ficoll. The W/Wv mice probably have no major defects in the function of mature lymphocytes, although the number of cells in their central lymphoid organs is decreased. The defect in lymphopoiesis may parallel to a certain extent the better known defects in myelopoiesis.

L19 ANSWER 34 OF 75 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.

ACCESSION NUMBER: 1981:189737 BIOSIS
DOCUMENT NUMBER: BA71:59729
TITLE: RESPONSES OF HEMOPOIETIC PRECURSOR CELLS IN MICE TO
BACTERIAL CELL WALL COMPONENTS.
AUTHOR(S): STABER F G; JOHNSON G R
CORPORATE SOURCE: CANCER RES. UNIT, WALTER AND ELIZA HALL INST. MED. RES.,
P.O. R. MELB. HOSP., VICTORIA 3050, AUST.
SOURCE: J CELL PHYSIOL, (1980) 105 (1), 143-152.
CODEN: JCLLAX. ISSN: 0021-9541.
FILE SEGMENT: BA; OLD
LANGUAGE: English
AB The influence upon different cellular and humoral parameters of hemopoiesis of 3 structurally unrelated, highly purified bacterial cell-wall components (BCWC) was investigated. The spleens of C57BL/6 mice assayed 6 days after the injection of either lipid A or outer-membrane lipoprotein, but not murein, showed a marked increase in granulocyte-macrophage, eosinophil, and megakaryocyte progenitor cell levels. The number of pluripotent hemopoietic stem cells (CFU-S) also increased in the spleens of mice treated with either lipid A or lipoprotein. Similar results were obtained following the injection of lipoprotein or lipid A into CBA or C57BL/6.nu mice. Genetically anemic Wf/Wf mice were found to have spontaneously elevated numbers of splenic progenitor cells, which increased further after the injection of lipid A. The proportion of the different splenic progenitor cell types were similar in both untreated and lipid A treated Wf/Wf mice, and in normal littermate controls. When tested in ***vitro*** , unfractionated or partially purified post-lipid A serum was found to stimulate the growth of granulocyte-macrophage progenitor cells (GM-CFC), but no detectable stimulation of eosinohphil, megakaryocyte, or erythroid progenitor cells was observed. The rise in splenic levels of the different progenitor cells is probably not mediated by the corresponding types of CSF [colony stimulating factor], but more likely by proliferation and differentiation of CFU-S.

L19 ANSWER 35 OF 75 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
ACCESSION NUMBER: 1981:22535 BIOSIS
DOCUMENT NUMBER: BR20:22535
TITLE: HEMOPOIESIS IN LONG-TERM BONE MARROW ***CULTURES*** A
REVIEW.
AUTHOR(S): DEXTER T M
CORPORATE SOURCE: CHRISTIE HOSP., HOLT RADIUM INST., MANCHESTER M20 9BX,
ENGL., UK.
SOURCE: SYMPOSIUM ON CULTIVATION OF HEMATOPOIETIC STEM CELLS AND OF
COMMITTED LEUKOCYTE PROGENITOR CELLS, MARBURG, WEST
GERMANY, MAR. 15, 1979. ACTA HAEMATOL, (***1979 (RECD***
*** 1980)***) 62 (5-6), 299-305.
CODEN: ACHAAH. ISSN: 0001-5792.
FILE SEGMENT: BR; OLD
LANGUAGE: English

L19 ANSWER 36 OF 75 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
ACCESSION NUMBER: 1980:170024 BIOSIS
DOCUMENT NUMBER: BA69:45020
TITLE: ORBITO FACIAL MUCOR MYCOSIS WITH UNUSUAL PATHOLOGICAL
FEATURES.
AUTHOR(S): ALBERT D M; LESSER R L; CYKIERT R C; ZAKOV Z N
CORPORATE SOURCE: HOWE LAB., MASS. EYE EAR INFIRM., 243 CHARLES ST., BOSTON,
MASS. 02114, USA.
SOURCE: BR J OPHTHALMOL, (1979) 63 (10), 699-703.
CODEN: BJOPAL. ISSN: 0007-1161.
FILE SEGMENT: BA; OLD
LANGUAGE: English
AB A 52 yr old man with mild diabetes and acute stem cell leukemia developed orbitofacial mucormycosis. ***Cultures*** showed that the fungus was Rhizopus oryzae. Vigorous treatment with amphotericin B and other bactericidal and bacteriostatic antibiotics for a concurrent sepsis failed to suppress the infections and the patient died. On post-mortem examination, characteristic hematoxylin-staining, broad aseptate fungal hyphae were found in the right eye, orbit and lung. A striking and unusual feature was the presence of brightly birefringent crystals within the severely degenerated eye. Histochemical staining and X-ray diffraction studies showed that these were Ca salts of fatty acids, apparently liberated from necrotic adipose tissue of the orbit.

L19 ANSWER 37 OF 75 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
ACCESSION NUMBER: 1979:270894 BIOSIS
DOCUMENT NUMBER: BA68:73398
TITLE: DEMONSTRATION OF LOW DENSITY ***LIPO*** PROTEIN
RECEPTORS IN MOUSE TERATO CARCINOMA ***STEM***
CELLS AND DESCRIPTION OF A METHOD FOR PRODUCING
RECEPTOR DEFICIENT MUTANT MICE.
AUTHOR(S): GOLDSTEIN J L; BROWN M S; KRIEGER M; ANDERSON R G W; MINTZ
B
CORPORATE SOURCE: DEP. MOL. GENET., UNIV. TEX. HEALTH SCI. CENT., DALLAS,
TEX. 75235, USA.
SOURCE: PROC NATL ACAD SCI U S A, (1979) 76 (6), 2843-2847.
CODEN: PNASA6. ISSN: 0027-8424.
FILE SEGMENT: BA; OLD
LANGUAGE: English
AB Familial hypercholesterolemia, a widespread human genetic disorder implicated in vascular and coronary disease, has had no laboratory animal counterpart that would enable the pathogenesis to be analyzed and drugs to be tested in vivo. The primary lesion in some patients is known to occur in the cells' initial handling of the major cholesterol-carrying lipoprotein of plasma. It entails a deficiency in the specific cell surface receptor that binds low density lipoprotein (LDL), with a consequent alteration in the control of cholesterol metabolism. A scheme was devised for producing, from developmentally versatile mouse teratocarcinoma stem cells, whole-animal models with a comparable genetic lesion. This required determining whether the tumor stem cells in ***culture*** express LDL receptors, and then establishing a selection or screening procedure to identify receptor-deficient mutants in mutagenized cell ***cultures*** . The teratocarcinoma cells did in fact have specific high-affinity LDL receptors which were similar to those reported for fibroblasts and parenchymal cells of specialized tissues and different from those of phagocytic cells. Sterols suppressed the otherwise efficient binding, internalization and degradation of LDL (125I-labeled) by the cells. Acetylation of LDL blocked the binding. Only LDL and not high density lipoprotein (HDL) was bound. After LDL uptake and degradation, the liberated cholesterol led, as expected, to increased cholesteryl ester formation; it also suppressed activity of 3-hydroxy-3-methylglutaryl coenzyme A reductase [HMG CoA reductase; mevalonate: NADP+ oxidoreductase (CoA-acylating), EC 1.1.1.34], the rate-limiting step in cholesterol biosynthesis. Cells with LDL receptors were readily visualized by administering a fluorescent derivative of LDL; in the fluorescence microscope, labeling was seen in all cells. Cells with experimentally depressed receptors, yielding little fluorescence, were separable from those with normal fluorescence in the fluorescence-activated cell sorter. Two methods for isolating receptor-deficient cells from mutagenized ***cultures*** are not available, either by visual recognition of low-fluorescing or nonfluorescing colonies in ***culture*** plates or by electronic cell sorting. Such mutants in an appropriate line of teratocarcinoma cells can then be passaged into blastocysts for full somatic tissue differentiation and germ-line development into mice.

L19 ANSWER 38 OF 75 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
ACCESSION NUMBER: 1978:243841 BIOSIS
DOCUMENT NUMBER: BA66:56338
TITLE: CONDITIONS CONTROLLING THE PROLIFERATION OF HEMOPOIETIC

STEM CELLS IN- ***VITRO*** .
AUTHOR(S): DEXTER T M; ALLEN T D; LAJTHA L G
CORPORATE SOURCE: PATERSON LAB., CHRISTIE HOSP. HOLT RADIUM INST., MANCHESTER
M20 9BX, ENGL., UK.
SOURCE: J CELL PHYSIOL, (1977) 91 (3), 335-344.
CODEN: JCLLAX. ISSN: 0021-9541.
FILE SEGMENT: BA; OLD
LANGUAGE: English
AB A liquid ***culture*** system is described whereby proliferation of [mouse] hemopoietic stem cells (CFU-S), production of granulocyte precursor cells (CFU-C) and extensive granulopoiesis can be maintained in
vitro for several months. Such ***cultures*** consist of adherent and non-adherent populations of cells. The adherent population contains phagocytic mononuclear cells, epithelial cells and giant ***fat*** cells. The latter appear to be important for ***stem*** ***cell*** maintenance and there is a strong tendency for maturing granulocytes to selectively cluster in and around areas of giant fat cell aggregations. By feeding the ***cultures*** at weekly intervals, between 10-15 population doublings of functionally normal CFU-S regularly
occurs. Increased population doublings may be obtained by feeding twice weekly. The ***cultures*** show initially extensive granulopoiesis followed, in a majority of cases, by an accumulation of blast cells. Eventually both blast cells and granulocytes decline and the ***cultures*** contain predominantly phagocytic mononuclear cells. ***Culturing*** at 33.degree. C leads to the development of a more profuse growth of adherent cells and these ***cultures*** show better maintenance of stem cells and increased cell density. When tested for colony stimulating activity (CSA) the ***cultures*** were uniformly negative. Addition of exogenous CSA causes a rapid decline in stem cells, reduced granulopoiesis and an accumulation of phagocytic mononuclear cells.

L19 ANSWER 39 OF 75 EMBASE COPYRIGHT 2002 ELSEVIER SCI. B.V.
ACCESSION NUMBER: 90109793 EMBASE
DOCUMENT NUMBER: 1990109793
TITLE: Properties and origin of osteoblasts.
AUTHOR: Wlodarski K.H.
CORPORATE SOURCE: Department of Histology and Embryology, Institute of
Biostructure Medical Academy, Chalubinskiego 5, 02-004 Warszawa, Poland
SOURCE: Clinical Orthopaedics and Related Research, (1990) -/252 (276-293).
ISSN: 0009-921X CODEN: CORTBR
COUNTRY: United States
DOCUMENT TYPE: Journal; General Review
FILE SEGMENT: 033 Orthopedic Surgery
LANGUAGE: English
SUMMARY LANGUAGE: English
AB Osteoblastic and chondroblastic (i.e., osteogenic) cells belong to the stromal cell system, which is associated with bone marrow, and bone and is
separate from the hematopoietic stem-cell system. Stromal ***stem*** ***cells*** are capabe of producing reticular, fibroblastic, osteogenic, and ***adipose*** stromal lines. Marrow-derived osteogenic cells are a component of marrow stroma, which in ***vitro*** form fibroblastic-type colonies. These colonies are a heterogeneous population with varying enzymatic expressions and potencies that differentiate into fibroblastic, reticular, adipocytic, and osteogenic populations. It is postulated that these colonies are a component of the stem- and progenitor cell populations. Progenitors of osteogenic cells are widely distributed in the extraskeletal organs. On contact with an adequate inductor, they differentiate into chondro- and/or osteoblasts, thus producing ectopic (i.e., induced) cartilage and/or bone. Such osteoprogenitor cells were termed inducible osteoprogenitor cells, in contrast to the determined osteoprogenitor cells, which are present in the bone marrow stroma and produce bone spontaneously. To the class of determined osteoprogenitors also belong endosteal cells, periosteal cells, and osteoblastic established cell lines. There is no evidence of the presence of osteogenic cells in the blood and peritoneal fluid. The concept of mesenchymal cells as an osteoblastic precursor in adult organisms is open to question.

L19 ANSWER 40 OF 75 EMBASE COPYRIGHT 2002 ELSEVIER SCI. B.V.
ACCESSION NUMBER: 88108402 EMBASE
DOCUMENT NUMBER: 1988108402
TITLE: Consistent involvement of band 12q14 in two different translocations in three lipomas from the same patient.
AUTHOR: Dal Cin P.; Turc-Carel C.; Sandberg A.A.
CORPORATE SOURCE: Cancer Center, Southwest Biomedical Research Institute,
Scottsdale, AZ 85251, United States
SOURCE: Cancer Genetics and Cytogenetics, (1988) 31/2 (237-240).
ISSN: 0165-4608 CODEN: CGCYDF
COUNTRY: United States
DOCUMENT TYPE: Journal
FILE SEGMENT: 013 Dermatology and Venereology
022 Human Genetics
005 General Pathology and Pathological Anatomy
LANGUAGE: English
SUMMARY LANGUAGE: English
AB We studied cytogenetically three distinct lipomas from a patient with multiple subcutaneous lipomas in the left shoulder area. A breakpoint at 12q14 was involved in structural rearrangements in the three lipomas resulting in two different reciprocal translocations, i.e., t(3;12)(q28;q14) in two and a t(1;12)(q34;q14) in the third. These results confirm the consistency of involvement of the breakpoint at 12q14 in lipomas and give support to the hypothesis that multiple ***lipomas*** evolve from different ***stem*** ***cells*** .

L19 ANSWER 41 OF 75 EMBASE COPYRIGHT 2002 ELSEVIER SCI. B.V.
ACCESSION NUMBER: 87194885 EMBASE
DOCUMENT NUMBER: 1987194885
TITLE: Adipose tissue development: The role of precursor cells and adipogenic factors. Part II: The regulation of the adipogenic conversion by hormones and serum factors.
AUTHOR: Loffler G.; Hauner H.
CORPORATE SOURCE: Institut fur Biochemie, Mikrobiologie und Genetik,
Universitat Regensburg, D-8400 Regensburg, Germany
SOURCE: Klinische Wochenschrift, (1987) 65/17 (812-817).
CODEN: KLWOAZ
COUNTRY: Germany
DOCUMENT TYPE: Journal
FILE SEGMENT: 003 Endocrinology
006 Internal Medicine
LANGUAGE: English
AB Cell ***culture*** systems have proven to be valuable models for the study of the processes involved in the formation of new fat cells. Two separate steps may be distinguished in adipocyte development. First, the determination of a mesenchymal ***stem*** ***cell*** into a preadipocyte, second, its conversion into a mature ***fat*** cell. In cloned cell lines adipose conversion depends on at least one postconfluent mitosis possibly induced by insulin-like growth factors or by as yet unknown mitogens. In addition growth hormone, glucocorticoids, and insulin
are needed for conversion to take place. The adipose conversion of preadipocytes orginating from the stromal vascular fraction of adipose tissue does not depend on postconfluent mitoses and needs only insulin and
glucocorticoid hormones in physiological concentrations. However, the ability to undergo adipose conversion is not stable in these cells, but gets lost after repeated subcultures or seeding at low densities. In addition to stimulating hormones an increasing number of factors inhibiting the conversion process have also been detected, the physiological function of which remains unclear at the moment.

L19 ANSWER 42 OF 75 EMBASE COPYRIGHT 2002 ELSEVIER SCI. B.V.
ACCESSION NUMBER: 86072426 EMBASE
DOCUMENT NUMBER: 1986072426
TITLE: Adipose conversion of ob17 cells and hormone-related events.
AUTHOR: Vannier C.; Gaillard D.; Grimaldi P.; et al.
CORPORATE SOURCE: Centre de Biochimie du CNRS Universite de Nice, 06034 Nice
Cedex, France
SOURCE: International Journal of Obesity, (1985) 9/SUPPL. 1 (41-53).
CODEN: IJOBDP
COUNTRY: United Kingdom

DOCUMENT TYPE: Journal
FILE SEGMENT: 037 Drug Literature Index
001 Anatomy, Anthropology, Embryology and Histology
003 Endocrinology
005 General Pathology and Pathological Anatomy
LANGUAGE: English
AB The ob17 preadipocyte clonal line has been established from the adipocyte
fraction of the epididymal fat pads of adult c57 BL/6J ob/ob mice. In vivo, injection of ouabain-resistant mutant cells (ob 17OR11 cell line) into athymic mice is followed by the formation of fat pads containing ouabain-resistant mature fat cells. In ***vitro*** , ob17 cells develop after confluence biochemical and morphological characteristics of adipocytes. The adipose conversion process is best represented by a stochastic model in which a pool of ***stem*** ***cells*** (adipoblasts) give rise to clusters of ***adipose*** cells and additional ***stem*** ***cells*** that remain in the population. The role of the different factors involved in such conversion is discussed; factors that enhance the number of susceptible cells (ACF or ACF-like compounds), factors without which no adipose conversion takes place (triiodothyronine, growth hormone and other factors still to be characterized), factors that enhance the expression of the differentiation program (insulin). The early emergence of lipoprotein lipase occurs normally in insulin-depleted medium. The separation of ob17 cells by isopycnic centrifugation shows that lipoprotein lipase is present at high levels in early differentiating cells which are still devoid of late markers, ie glycerol-3-phosphate dehydrogenase and triglycerides. These results are discussed with respect to the determination of cellularity during development of adipose tissue in vivo.

L19 ANSWER 43 OF 75 EMBASE COPYRIGHT 2002 ELSEVIER SCI. B.V.
ACCESSION NUMBER: 85026109 EMBASE
DOCUMENT NUMBER: 1985026109
TITLE: 5-Azacytidine induction of stable mesodermal stem cell lineages from 10T1/2 cells: Evidence for regulatory genes controlling determination.
AUTHOR: Konieczny S.F.; Emerson Jr. C.P.
CORPORATE SOURCE: Department of Biology, University of Virginia, Charlottesville, VA 22901, United States
SOURCE: Cell, (1984) 38/3 (791-800).
CODEN: CELLB5
COUNTRY: United States
DOCUMENT TYPE: Journal
FILE SEGMENT: 037 Drug Literature Index
021 Developmental Biology and Teratology
001 Anatomy, Anthropology, Embryology and Histology
022 Human Genetics
LANGUAGE: English
AB 5-Azacytidine converts the mouse embryonic cell line C3H10T1/2 into differentiated chondrocytes, adipocytes, and skeletal muscle. Clonal and 2D protein gel analyses demonstrate that 5-azacytidine converts 10T1/2 cells into three stably determined, but undifferentiated, stem cell lineages which can differentiate into myofibers, chondrocytes, and adipocytes. Conversion of 10T1/2 cells is accompanied by specific changes
in protein synthetic patterns unique for each cell lineage. We propose that 5-azacytidine converts 10T1/2 cells by hypomethylation of 'determination' regulatory loci which establish lineages of ***stem*** ***cells*** with a restricted potential to differentiate into muscle, cartilage, or ***fat*** cells. Our results suggest that these three lineages are specified by separate regulatory loci and that as few as 1-3 hypomethylation events per cell are sufficient to activate the hypothesized muscle regulatory locus. Conversion of 10T1/2 cells by 5-azacytidine provides a model for studying regulatory genes involved in cell lineage determination.

L19 ANSWER 44 OF 75 EMBASE COPYRIGHT 2002 ELSEVIER SCI. B.V.
ACCESSION NUMBER: 84079809 EMBASE
DOCUMENT NUMBER: 1984079809
TITLE: Indirect stimulation of hematopoietic ***stem*** ***cell*** (CFUs) proliferation by protein-free ***lipopolysaccharides*** (lipid A) and lipid A-associated protein.
AUTHOR: Ploemacher R.E.
CORPORATE SOURCE: Department of Cell Biology and Genetics, Erasmus
University, Rotterdam, Netherlands
SOURCE: IRCS Medical Science, (1984) 12/1 (89-90).
CODEN: IRLCDZ
COUNTRY: United Kingdom
DOCUMENT TYPE: Journal
FILE SEGMENT: 025 Hematology
029 Clinical Biochemistry
LANGUAGE: English
AB The lipid A moieties of protein-free lipopolysaccharides (LPS) and other lipid-associated protein (LAP) have differential effects on hemopoiesis and evoke a large hemopoietic stem cell (CFUs) accumulation in the spleen
of rodents. Upon ip implantation of bone marrow cell-containing diffusion chambers (DC) in mice, that have received 500 .mu.g LPS-B before or after
DC implantation, an enhanced CFUs recovery was observed in DC's carried by
such hosts as compared to normal DC hosts. This suggested the existence of
a humoral mediator of CFUs proliferation induced by LPS-B injection. In serum free in ***vitro*** ***cultures*** both LPS-B and lipid A were unable to induce any CFUs maintenance over a 4 day period, whereas in
the presence of highly purified stem cell activating factor (SAF) from Con-A-stimulated mouse spleen cell ***cultures*** the CFUs recovery amounted to more than the inoculum value. Addition of post-LPS-B serum or
post-lipid A serum to these serum free ***cultures*** was equally effective in stimulating a significant CFU proliferation as compared to the lack of CFU growth in ***cultures*** to which the same volume of normal mouse serum had been added. These data indicate that both LAP and
lipid A do not directly stimulate CFUs to proliferate. Upon injection these substances evoked the release of a serum activity which induces CFUs
proliferation in ***vitro*** and mimics the effect of SAF.

L19 ANSWER 45 OF 75 EMBASE COPYRIGHT 2002 ELSEVIER SCI. B.V.
ACCESSION NUMBER: 84011611 EMBASE
DOCUMENT NUMBER: 1984011611
TITLE: Adipocyte stem cell: A brief review.
AUTHOR: Soda R.; Tavassoli M.
CORPORATE SOURCE: VA Hosp., Univ. Mississippi Med. Cent., Jackson, MS 39216,
United States
SOURCE: International Journal of Cell Cloning, (1983) 1/2 (79-84).
CODEN: IJCCE3
COUNTRY: United States
DOCUMENT TYPE: Journal
FILE SEGMENT: 022 Human Genetics
LANGUAGE: English
AB Our fundamental understanding of adipose tissue kinetics has, in recent years, been advanced by the finding that there exists in the white ***adipose*** tissue, a population of ***stem*** ***cells*** which under appropriate conditions can differentiate and mature into adipocytes containing lipid inclusions. The evidence for the presence of this stem cell population is derived from both in vivo and in ***vitro*** studies.

L19 ANSWER 46 OF 75 MEDLINE
ACCESSION NUMBER: 1999437306 MEDLINE
DOCUMENT NUMBER: 99437306 PubMed ID: 10509607
TITLE: Adipocyte development is dependent upon stem cell recruitment and proliferation of preadipocytes.
AUTHOR: Kras K M; Hausman D B; Hausman G J; Martin R J
CORPORATE SOURCE: Department of Foods and Nutrition, University of Georgia,
Athens 30602, USA.
CONTRACT NUMBER: DK-47246 (NIDDK)
SOURCE: OBESITY RESEARCH, ***(1999 Sep)*** 7 (5) 491-7.

Journal code: 9305691. ISSN: 1071-7323.
PUB. COUNTRY: United States
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199910

ENTRY DATE: Entered STN: 20000111
Last Updated on STN: 20000111
Entered Medline: 19991029

AB OBJECTIVES: The ability to acquire fat cells persists over the life spans of animals. It is unknown whether adipocyte acquisition is the result of preadipocyte proliferation or stem cell recruitment to become adipocytes. The purposes of these studies were 1) to characterize early differentiation of stromal vascular (S-V) cells to preadipocytes as it is influenced by insulin, dexamethasone (DEX), and insulin-like growth factor-I (IGF-I); and 2) to determine whether new ***fat*** cells arise from ***stem*** ***cell*** recruitment or preadipocyte proliferation. RESEARCH METHODS AND PROCEDURES: Freshly isolated S-V cells from rat inguinal adipose tissues were plated for 24 hours then exposed to serum-free medium. Results: Approximately 15% of freshly plated S-V cells were preadipocytes as determined by a preadipocyte specific marker, AD3. Total cell number and proportion of preadipocytes were significantly greater with 100 nM insulin treatment than with 0, 0.1, or 1.0 nM, but IGF-I treatment at 10 nM resulted in preadipocyte development similar to that with 100 nM insulin treatment. The addition of 5 nM DEX to the 100 nM insulin treatment resulted in a 20% increase in preadipocyte number by day 2 when compared to either treatment alone. 5-Bromo-2'-deoxy-uridine treatment suppressed the increased proportion of preadipocytes from days 0-2 in non-insulin treated cells and prevented the increase typically observed with insulin. A mitosis inhibitor also significantly reduced the proportion of preadipocytes. DISCUSSION: These results show for the first time that S-V cells are recruited as preadipocytes and that proliferation of these preadipocytes and early differentiation occur simultaneously.

L19 ANSWER 47 OF 75 MEDLINE
ACCESSION NUMBER: 1999145510 MEDLINE
DOCUMENT NUMBER: 99145510 PubMed ID: 9989984
TITLE: CD34(+) hematopoietic ***stem*** ***cells*** exert accessory function in ***lipopolysaccharide*** -induced T cell stimulation and CD80 expression on monocytes.
AUTHOR: Mattern T; Girroleit G; Flad H D; Rietschel E T; Ulmer A J
CORPORATE SOURCE: Department of Immunology and Cell Biology, Research Center Borstel, 23845 Borstel, Germany.. ajulmer@fz-borstel.de
SOURCE: JOURNAL OF EXPERIMENTAL MEDICINE, ***(1999 Feb 15)*** 189 (4) 693-700.
Journal code: 2985109R. ISSN: 0022-1007.
PUB. COUNTRY: United States
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199906
ENTRY DATE: Entered STN: 19990614
Last Updated on STN: 19990614
Entered Medline: 19990603

AB CD34(+) hematopoietic stem cells, which circulate in peripheral blood with very low frequency, exert essential accessory function during lipopolysaccharide (LPS)-induced human T lymphocyte activation, resulting in interferon gamma production and proliferation. In contrast, stimulation of T cells by "conventional" recall antigens is not controlled by blood stem cells. These conclusions are based on the observation that depletion of CD34(+) blood stem cells results in a loss of LPS-induced T cell stimulation as well as reduced expression of CD80 antigen on monocytes. The addition of CD34-enriched blood stem cells resulted in a recovery of reactivity of T cells and monocytes to LPS. Blood stem cells could be replaced by the hematopoietic stem cell line KG-1a. These findings may be of relevance for high risk patients treated with stem cells or stem cell recruiting compounds and for patients suffering from endotoxin-mediated diseases.

L19 ANSWER 48 OF 75 MEDLINE
ACCESSION NUMBER: 97378445 MEDLINE
DOCUMENT NUMBER: 97378445 PubMed ID: 9234064
TITLE: Human mesenchymal stem cells respond to fibroblast growth factors.
AUTHOR: van den Bos C; Mosca J D; Winkles J; Kerrigan L; Burgess W H; Marshak D R
CORPORATE SOURCE: Osiris Therapeutics, Inc., Baltimore, MD 21231-2001, USA.
SOURCE: HUMAN CELL, ***(1997 Mar)*** 10 (1) 45-50.
Journal code: 8912329. ISSN: 0914-7470.
PUB. COUNTRY: Japan
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199710
ENTRY DATE: Entered STN: 19971105
Last Updated on STN: 19971105
Entered Medline: 19971022

AB Human mesenchymal stem cells can be isolated from bone marrow aspirates, purified and ***cultured*** for many passages without losing their unique properties. One of the hallmarks of stem cells is pluripotency, and human mesenchymal stem cells can be induced to assume phenotypes of mesenchymal tissues including, but not limited to, those of osteocytes, chondrocytes and adipocytes. Due to their ability to form cartilage, bone, ***fat*** and other connective tissue, human mesenchymal ***stem*** ***cells*** have great potential in regenerating diseased or injured tissues. Successful growth of human mesenchymal stem cells is essential to this process, and we have examined the response of human mesenchymal stem cells towards FGF1 and FGF2, two potent growth factors for human tissues. We provide evidence that: 1) human mesenchymal stem cells produce mRNA for receptors for FGF1 and FGF2; 2) these receptors can be detected on the surface of human mesenchymal stem cells; 3) FGF1 and FGF2 increase the rate at which human mesenchymal stem cells proliferate.

L19 ANSWER 49 OF 75 MEDLINE
ACCESSION NUMBER: 97241003 MEDLINE
DOCUMENT NUMBER: 97241003 PubMed ID: 9086439
TITLE: Antimycotic therapy with ***liposomal*** amphotericin-B for patients undergoing bone marrow or peripheral blood ***stem*** ***cell*** transplantation.
AUTHOR: Kruger W; Stockschlader M; Sobottka I; Betker R; De Wit M; Kroger N; Grimm J; Arland M; Fiedler W; Erttmann R; Zander A R
CORPORATE SOURCE: Department of Oncology/Haematology, University-Hospital Eppendorf, Hamburg, Germany.
SOURCE: LEUKEMIA AND LYMPHOMA, ***(1997 Feb)*** 24 (5-6) 491-9.
Journal code: 9007422. ISSN: 1042-8194.
PUB. COUNTRY: Switzerland
(CLINICAL TRIAL)
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199707
ENTRY DATE: Entered STN: 19970721
Last Updated on STN: 19970721
Entered Medline: 19970708

AB Suspected deep or systemic mycosis in patients undergoing high-dose therapy and autologous or allogeneic bone marrow transplantation (BMT) requires an immediate systemic antimycotic therapy. Intravenous therapy with the standard drug conventional amphotericin-B is associated with severe adverse effects like nephrotoxicity and chills. Furthermore, BMT patients often receive other potential nephrotoxic drugs such as CsA or virustatics. In this study, we report 74 BMT-patients treated with liposomal amphotericin-B for ***culture*** -documented aspergillosis (n = 5) or candidiasis (n = 6), or for serologically (n = 35) or clinically suspected mycosis or as prophylaxis (n = 2). Therapy was initiated with a

median dose of 2.8 (0.64-5.09) mg/kg body-weight and continued for 13 (1-55) days. The drug was excellently tolerated and only in one was therapy stopped due to severe chills and fever. Severe organ impairment was not observed under therapy with liposomal amphotericin-B. Creatinine decreased in five patients after an increase under preceding therapy with the conventional formulation. Influence of liposomal amphotericin-B on bilirubin and transaminases was difficult to evaluate due to therapy-related toxicity, veno-occlusive disease (VOD), and graft-versus-host disease (GvHD). 10/11 ***culture*** -positive patients died from aspergillosis (5/5) or candidiasis (5/6), but in 9/11 of these subjects the immunity was additionally compromised by GvHD, steroid therapy, and VOD. Liposomal amphotericin-B was effective in preventing relapse of systemic mycosis in 10/12 patients with a history of aspergillosis (n = 11) or candidiasis (n = 1). We conclude, that favourable toxicity of liposomal amphotericin-B should encourage dose escalation studies of liposomal amphotericin-B randomised against the conventional formulation and that the comparison of patients undergoing BMT with patients under standard chemotherapy might be difficult because of additional risk factors of the BMT-patients.

L19 ANSWER 50 OF 75 MEDLINE
ACCESSION NUMBER: 95252526 MEDLINE
DOCUMENT NUMBER: 95252526 PubMed ID: 7734732
TITLE: Mesenchymal stem cells reside within the connective tissues of many organs.
AUTHOR: Young H E; Mancini M L; Wright R P; Smith J C; Black A C
Jr; Reagan C R; Lucas P A
CORPORATE SOURCE: Division of Basic Medical Science, Mercer University School of Medicine, Macon, Georgia 31207, USA.
SOURCE: DEVELOPMENTAL DYNAMICS, ***(1995 Feb)*** 202 (2)
137-44.
Journal code: 9201927. ISSN: 1058-8388.
PUB. COUNTRY: United States
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199506
ENTRY DATE: Entered STN: 19950615
Last Updated on STN: 19950615
Entered Medline: 19950608

AB Previous studies have noted the presence of mesenchymal stem cells located within the connective tissue matrices of avian skeletal muscle, dermis, and heart. In these studies, clonal analysis coupled with dexamethasone treatment revealed the presence of multiple populations of stem cells composed of both lineage-committed progenitor mesenchymal stem cells and lineage-uncommitted pluripotent mesenchymal stem cells. The present study was undertaken to assess the distribution of these stem cells in the connective tissues throughout various regions of the body. Day 11 chick embryos were divided into 26 separate regions. Heart, limb skeletal muscle, and limb dermis were included as control tissues. Cells were harvested enzymatically and grown using conditions optimal for the isolation, cryopreservation, and propagation of avian mesenchymal stem cells. Cell aliquots were plated, incubated with various concentrations of dexamethasone, and examined for differentiated phenotypes. Four recurring phenotypes appeared in dexamethasone-treated ***stem*** ***cells*** : skeletal muscle myotubes, ***fat*** cells, cartilage nodules, and bone nodules. These results suggest that progenitor mesenchymal stem cells and putative pluripotent mesenchymal stem cells with the potential to form at least four tissues of mesodermal origin have a widespread distribution throughout the body, being located within the connective tissue compartments of many organs and organ systems.

L19 ANSWER 51 OF 75 MEDLINE
ACCESSION NUMBER: 85191849 MEDLINE
DOCUMENT NUMBER: 85191849 PubMed ID: 3887522
TITLE: [Lipoprotein lipase and adipocyte differentiation]. Lipoproteine lipase et differenciation adipocytaire.
AUTHOR: Ailhaud G; Amri E; Czerucka D; Forest C; Gaillard D; Grimaldi P; Negrel R; Vannier C
SOURCE: REPRODUCTION, NUTRITION, DEVELOPPEMENT, ***(1985)*** 25
(1B) 153-8. Ref: 28
Journal code: 8005903. ISSN: 0181-1916.
PUB. COUNTRY: France
Journal; Article; (JOURNAL ARTICLE)
General Review; (REVIEW)
LANGUAGE: French
FILE SEGMENT: Priority Journals
ENTRY MONTH: 198506
ENTRY DATE: Entered STN: 19900320
Last Updated on STN: 19900320
Entered Medline: 19850603

AB Some hormonal factors, possibly involved in the proliferation and differentiation of adipose precursor cells in vivo, have been characterized in ***vitro*** using different preadipocyte cell lines established from rodent adipose tissue. The process of adipose conversion has also been studied using these cell lines; in this process, stem cells (adipoblasts) were committed at any cell division during the growth phase. At confluence, committed cells (preadipocytes) underwent a limited number of mitoses and differentiated into ***adipose*** cells, whereas the uncommitted cells remained as ***stem*** ***cells*** in the cell population. This stochastic model could be extended to the development of rat adipose tissue in vivo. The study of adipose conversion showed the early emergence of lipoprotein lipase (LPL) and monoglyceride lipase (MGL). LPL activity appeared in the cells before any triglyceride accumulation. In contrast, this accumulation seemed dependent upon the emergence of glycerol-3-phosphate dehydrogenase. In ***vitro*** experiments clearly established that LPL-containing (differentiating) cells underwent postconfluent mitoses. This limited proliferation was in agreement with previous data obtained in vivo and indicates that only triglyceride-containing (mature) cells could not divide.

L19 ANSWER 52 OF 75 WPIDS (C) 2002 THOMSON DERWENT
ACCESSION NUMBER: 1999-494288 [41] WPIDS
DOC. NO. CPI: C1999-144892
TITLE: Modifying hematopoietic stem cells, useful for disease therapy and as ideal targets for gene therapy eg. beta thalassemia and sickle cell anemia.
DERWENT CLASS: B04 D16
INVENTOR(S): MURRAY, L J; TUSHINSKI, R J; YOUNG, J C
PATENT ASSIGNEE(S): (NOVS) NOVARTIS AG; (NOVS) NOVARTIS-ERFINDUNGEN VERW GES MBH
COUNTRY COUNT: 85
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
WO 9940180	A2	19990812 (199941)*	EN	57	<--

RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW NL OA PT SD SE SZ UG ZW
W: AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG US UZ VN YU ZW
AU 9927212 A 19990823 (200005) <--
EP 1053302 A2 20001122 (200061) EN
R: AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE
JP 2002502599 W 20020129 (200211) 69

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 9940180	A2	WO 1999-EP597	19990129
AU 9927212	A	AU 1999-27212	19990129
EP 1053302	A2	EP 1999-907460	19990129
		WO 1999-EP597	19990129

JP 2002502599 W WO 1999-EP597 19990129
JP 2000-530594 19990129

FILING DETAILS:

PATENT NO	KIND	PATENT NO
AU 9927212	A Based on	WO 9940180
EP 1053302	A2 Based on	WO 9940180
JP 2002502599 W	Based on	WO 9940180

PRIORITY APPLN. INFO: US 1999-237291 19990125; US 1998-19428 19980205; US 1998-76836P 19980304
AN 1999-494288 [41] WPIDS
AB WO 9940180 A UPAB: 19991011
NOVELTY - A method (I) for modifying a hematopoietic stem cell is new, and
comprises contacting a gene delivery vehicle comprising a polynucleotide sequence with a population of hematopoietic stem cells ***cultured*** in the presence of an effective amount of mpl ligand (such as thrombopoietin) and a flt3 ligand.
DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the
following:
(1) a method (II) for modifying a hematopoietic stem cell (HSC), comprising contacting a gene delivery vehicle comprising a polynucleotide sequence with a population of HSC's ***cultured*** in the presence of an effective amount of a thrombopoietin ligand, a flt3 ligand and interleukin 6 (IL-6); and
(2) a method (III) for promoting the expansion of HSC's in ***culture*** , comprising ***culturing*** the cells in a ***culture*** including an effective amount of thrombopoietin (TPO), a flt3 ligand and IL-6.
USE - Pluripotent hematopoietic stem cell (HSC) are ideal candidates for disease therapy and ideal target cells for gene therapy, eg. Severe Combined Immunodeficiency (SCID), chromic myelogenous leukemia (CML), beta
-thalassemia, sickle cell anemia etc. HSC's are also responsible for restoring blood cell numbers if the hematopoietic system is depleted in some way, especially for restoring hematopoietic capability in a subject. HSC's are transduced with a therapeutic gene, when transduction is ex vivo, the transduced cells are administered to the recipient, therefore is useful for treating diseases amenable to gene transfer into HSC's by administering the gene ex vivo or in vivo, eg. adenosine deaminase deficiency, recombinase deficiency, recombinase regulatory gene deficiency
etc.
ADVANTAGE - The system is an efficient ex vivo non-stromal cell ***culture*** which maintains stem cell pluripotency, therefore resulting in induction/activation or hematopoietic stem cell (HSC) cycling without loss of pluripotency. The method should result in cells suitable for in vivo use with minimal toxicity to the individual receiving treatment. The method gives rise to HSC characterized by the capability of self renewal and the ability to give rise to all hematopoietic stem cells.
Dwg.0/9

L19 ANSWER 53 OF 75 WPIDS (C) 2002 THOMSON DERWENT
ACCESSION NUMBER: 1986-192668 [30] WPIDS
DOC. NO. CPI: C1986-082794
TITLE: Compsn. of a ***culture*** medium for cells derived from blood ***stem*** ***cells*** - contg. sugar ***fatty*** acid ester cpds..
DERWENT CLASS: B04 D16
PATENT ASSIGNEE(S): (AGEN) AGENCY OF IND SCI & TECHNOLOGY
COUNTRY COUNT: 1
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
JP 61124378	A	19860612	(198630)*		5 <--
JP 63038189	B	19880728	(198834)		<--

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
JP 61124378	A	JP 1984-246248	19841122

PRIORITY APPLN. INFO: JP 1984-246248 19841122
AN 1986-192668 [30] WPIDS
AB JP 61124378 A UPAB: 19930922
In ***culture*** medium compsn. for proliferatively ***culturing*** cells derived from blood stem cells under serum-free or low-serum conditions, improvement comprises contg. sugar fatty acid ester cpds.
Sugar fatty acid esters used in this invention are substances in which sugar and fatty acid are ester-linked. Examples of sugars include monosaccharide, e.g. glucose, mannose, etc., disaccharide, cane sugar, maltose, lactose, etc. Examples of fatty acids include lauric acid, stearic acid, oleic acid, linolenic acid, linolic acid, etc. Examples of basic ***culture*** mediums used for serum-free or low-serum ***culture*** mediums include RPMI-1640 medium, min. essential medium,
L-15 medium, William's medium, etc.
USE/ADVANTAGE - Serum-free or low-serum ***culture*** mediums of
compsn., which are similar to serum ***culture*** mediums, have suitable surface tension for proliferation of cells derived from blood stem cells. Serum-free medium contg. known proteins, e.g. insulin, transferrin, etc. is substantial protein-free medium and ***culture*** medium of low cost for commercial use. Process for separating and purifying objective prod. from ***culture*** soln. obtd. by ***culturing*** cells derived from human blood stem cells can be simplified. Compsn. is very useful in commercial practice.
0/0

L19 ANSWER 54 OF 75 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1999:819469 HCAPLUS
DOCUMENT NUMBER: 132:32930
TITLE: The efficient ***culture*** of stem cells for the production of hemoglobin
INVENTOR(S): Bell, David; Matthews, Kathryn Emma; Mueller, Susan G.
PATENT ASSIGNEE(S): Hemosol Inc., Can.
SOURCE: PCT Int. Appl., 62 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9967360	A2	19991229	WO 1999-CA606	19990625 <--
WO 9967360	A3	20000720		

W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ,
DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS,
JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK,
MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ,
TM, TR, TT, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD,
RU, TJ, TM
RW: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK,
ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG,
CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG
AU 9945956 A1 20000110 AU 1999-45956 19990625
EP 1104455 A2 20010606 EP 1999-928951 19990625
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
IE, FI
PRIORITY APPLN. INFO.: CA 1998-2241576 A 19980625
CA 1999-2260332 A 19990125
WO 1999-CA606 W 19990625
AB The present invention describes a serum-free medium that promotes the growth and differentiation of erythroid cells, cells that are highly transducible by a non-viral method and genes which increase the growth of
erythroid cells and decrease their dependency on Epo. This invention can be used in the expansion of hematopoietic stem cells to produce ***cultures*** of erythroid cells as a source of erythroid-specific

proteins such as Hb. Hematopoietic stem cells are ***cultured*** ex vivo in a serum-free ***culture*** medium with the addn. of IL-3, SCF and EPO. Cells transfected with the gene described in the present invention can be ***cultured*** in the serum-free ***culture*** medium with decreased dependency on Epo and other cytokines, thereby reducing the cost of the prodn. of Hb.

L19 ANSWER 55 OF 75 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1999:795940 HCAPLUS
DOCUMENT NUMBER: 132:11131
TITLE: In ***vitro*** maintenance of hematopoietic stem cells
INVENTOR(S): Thiede, Mark A.; Pittenger, Mark F.; Mbalaviele, Gabriel
PATENT ASSIGNEE(S): Osiris Therapeutics, Inc., USA
SOURCE: PCT Int. Appl., 23 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9964566	A2	19991216	WO 1999-US12851	19990608 <--
WO 9964566	A3	20010419		

W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

CA 2329519	AA	19991216	CA 1999-2329519	19990608 <--
AU 9943365	A1	19991230	AU 1999-43365	19990608 <--
US 6030836	A	20000229	US 1999-327840	19990608
EP 1108011	A2	20010620	EP 1999-955497	19990608

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI
PRIORITY APPLN. INFO.: US 1998-88431P P 19980608
WO 1999-US12851 W 19990608

AB The present invention is directed to human mesenchymal stem cells isolated from a tissue specimen, such as marrow cells, and to the method of co-***culturing*** isolated mesenchymal stem cells and(or) mesenchymal stem cell-derived adipocytes with CD34+ human hematopoietic progenitor cells such that the hematopoietic stem cells retain their CD34+ phenotype.

L19 ANSWER 56 OF 75 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1999:764165 HCAPLUS
DOCUMENT NUMBER: 132:11619
TITLE: Compositions and methods for use in affecting hematopoietic stem cell populations in mammals
INVENTOR(S): Ziegler, Benedikt L.; Peschle, Cesare
PATENT ASSIGNEE(S): Thomas Jefferson University, USA; Instituto Superiore di Sanita
SOURCE: PCT Int. Appl., 83 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9961584	A1	19991202	WO 1999-US12054	19990528 <--

W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

AU 9943235	A1	19991213	AU 1999-43235	19990528 <--
EP 1084227	A1	20010321	EP 1999-953353	19990528

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI

JP 2002516085	T2	20020604	JP 2000-550970	19990528

PRIORITY APPLN. INFO.: US 1998-87153P P 19980529
WO 1999-US12054 W 19990528

AB The invention relates to a method of obtaining and expanding a purified population of long-term repopulating hematopoietic stem cells. The method comprises obtaining a population of cells from human hematopoietic tissue and isolating a population of KDR+ cells therefrom, thereby obtaining a cell population enriched for long-term repopulating human hematopoietic stem cells. The invention also relates to the uses of a purified population of long-term repopulating hematopoietic stem cells. The invention includes a method of inhibiting rejection of a transplanted organ. The method comprises ablating the bone marrow of a transplant recipient and administering to the recipient a multi-lineage engrafting dose of an isolated and purified long-term repopulating human hematopoietic stem cell obtained from the hematopoietic tissue of the donor of said organ, thereby inhibiting rejecting of a transplanted organ.
REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L19 ANSWER 57 OF 75 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1999:9664 HCAPLUS
DOCUMENT NUMBER: 130:62029
TITLE: Lipoproteins as nucleic acid vectors for gene therapy
INVENTOR(S): Guevara, Juan G., Jr.; Hoogeveen, Ron C.; Moore, J. Paul
PATENT ASSIGNEE(S): Baylor College of Medicine, USA
SOURCE: PCT Int. Appl., 294 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9856938	A1	19981217	WO 1998-US11927	19980610 <--

W: AL, AM, AT, AU, AZ, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BJ, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG

AU 9881401	A1	19981230	AU 1998-81401	19980610 <--

PRIORITY APPLN. INFO.: US 1997-874807 19970613
US 1998-79030 19980514
WO 1998-US11927 19980610

AB The present invention relates to materials and methods for the in vivo transport and deliver of nucleic acids. More particularly, it concerns the use of lipoproteins, including but not limited to, low-d. lipoproteins (LDL), and/or apolipoproteins for the binding and in vivo transport of

nucleic acids. Discovery of the nucleic acid-binding properties of apoB-100 suggests that lipoproteins contg. apoB-100, as naturally occurring liposomes, may function as gene transfer agents. By using highly purified LDL as such an agent, the inventors were able to transfect ***cultured*** human skin fibroblasts in ***vitro*** and to express a green fluorescent protein reporter gene in vivo. The gene transfer mediated by LDL was more efficient than that mediated by LipoFectin, and
LDL did not exhibit any toxicity, immunogenicity, or serum inhibition. Regions in the amino acid sequence of apoB-100 are identified with homol.
to various DNA-binding motifs including: (1) proline pipe helix DNA-binding motifs, (2) ISGF3.gamma.-like DNA-binding motifs, (3)steroid
regulatory element binding protein (SREBP)-like DNA-binding motifs, (4) coiled coil (leucine zipper) motifs, and (5) nucleotide (ATP)-binding motifs, as well as nuclear localization signals. In addn., the present invention relates to the use of lipoproteins in the early detection of cancer and/or metastatic cancer and/or arteriosclerosis.
REFERENCE COUNT: 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L19 ANSWER 58 OF 75 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1998:695216 HCAPLUS
DOCUMENT NUMBER: 130:108499
TITLE: In ***vitro*** -differentiated embryonic stem cell macrophages. A model system for studying atherosclerosis-associated macrophage functions
AUTHOR(S): Moore, Kathryn J.; Fabunmi, Rosalind P.; Andersson, Lorna P.; Freeman, Mason W.
CORPORATE SOURCE: Lipid Metabolism Unit, Massachusetts General Hospital,
Boston, MA, 02114, USA
SOURCE: Arteriosclerosis, Thrombosis, and Vascular Biology (***1998***), 18(10), 1647-1654
CODEN: ATVBFA; ISSN: 1079-5642
PUBLISHER: Lippincott Williams & Wilkins
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Monocytes/macrophages (M.PHI.) appear to play a crit. role in the initiation and progression of atherosclerotic lesions. In this study, the authors characterized in ***vitro*** -differentiated embryonic stem (ES) cell macrophages as a model system for studying atherosclerosis-assocd. M.PHI. functions. Using immunofluorescence staining and Western
anal., the authors demonstrate that ES M.PHI. express typical macrophage cell surface markers, as well as the known receptors for modified forms of low-d. lipoprotein (LDL), including the M.PHI. scavenger receptors (SR-A
type I and type II), CD36, and CD68. Differentiated ES M.PHI. specifically bind and degrade 125I-labeled acetylated LDL with high affinity, and their incubation with acetylated LDL (15 .mu.g/mL) for 48 h produces characteristic "foamy" M.PHI., as visualized by oil red O staining. ES M.PHI. also express matrix-degrading metalloproteinases (MMP-3, MMP-9), which have been implicated in collagen breakdown in the
fibrous cap of atherosclerotic plaques, and secrete cytokines (tumor necrosis factor-.alpha., interleukin-6) in response to inflammatory stimuli. Transfection expts., using a green fluorescent protein reporter gene, driven by the myeloid-specific promoter, CD11b, demonstrated that ES
M.PHI. can also be used to study macrophage-restricted gene expression in
vitro . Thus, ES Mo exhibit many properties typical of arterial lesion macrophages. Its ease of genetic manipulation makes it an attractive system for investigations of macrophage functions in ***vitro*** .
REFERENCE COUNT: 26 THERE ARE 26 CITED REFERENCES AVAILABLE FOR THIS
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L19 ANSWER 59 OF 75 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1998:573968 HCAPLUS
DOCUMENT NUMBER: 129:310552
TITLE: Liposomal vincristine for the treatment of human acute lymphoblastic leukemia in severe combined immunodeficient (SCID) mice
AUTHOR(S): Millar, John L.; Millar, Barbara C.; Powles, Ray L.; Steele, Jeremy P. C.; Clutterbuck, Robyn D.; Mitchell, Paul L. R.; Cox, Gerry; Forssen, Eric; Catovsky, Daniel
CORPORATE SOURCE: Academic Department of Haematology and Cytogenetics,
Institute of Cancer Research, The Royal Marsden NHS Trust, Surrey, SM2 5NG, UK
SOURCE: British Journal of Haematology (***1998***), 102(3), 718-721
CODEN: BJHEAL; ISSN: 0007-1048
PUBLISHER: Blackwell Science Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Non-obese diabetic NOD/SCID mice have been used to grow human leukemia as
a systemic disease. The animals were inoculated with leukemic cells obtained from a 36-yr-old male with early B-cell precursor acute lymphoblastic leukemia and on day 15 were given the first of three weekly injections of 1 mg/kg vincristine or equimolar liposomal vincristine. The development of leukemia in the mice was monitored by taking weekly blood
samples and measuring the cell content by flow cytometry. The median time
to 50% human cells in the peripheral blood of mice treated with free vincristine was 41 d from the start of treatment compared with 49 d for mice treated with liposomal vincristine ($P < 0.cntdot.01$). The median day of death for mice treated with free vincristine was 47 d from the start of treatment and 57 d for mice receiving liposomal vincristine ($P < 0.cntdot.01$), thus providing a 21% increase in lifespan for animals treated with the liposomal prepn. There was slightly greater wt. loss in mice treated with free vincristine than those given liposomal vincristine. Measurement of in ***vitro*** colony forming bone marrow progenitor cells in similarly treated, tumor-free mice, showed no difference in progenitor cell survival between mice that received either type of vincristine. The authors conclude that encapsulating vincristine in liposomes improves the therapeutic index of this drug measured in mice bearing human leukemia. This may lead to use of the drug in conventional combination chemotherapy with greater safety or, in this setting, at higher dosage.

L19 ANSWER 60 OF 75 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1998:417220 HCAPLUS
DOCUMENT NUMBER: 129:157305
TITLE: Modulation of microglia by stem cell factor
AUTHOR(S): Zhang, Su-Chun; Fedoroff, Sergey
CORPORATE SOURCE: Department of Anatomy and Cell Biology. College of
Medicine, University of Saskatchewan, Saskatoon, SK, Can.
SOURCE: Journal of Neuroscience Research (***1998***), 53(1), 29-37
CODEN: JNREDK; ISSN: 0360-4012
PUBLISHER: Wiley-Liss, Inc.
DOCUMENT TYPE: Journal
LANGUAGE: English
AB We reported previously that stem cell factor (SCF) is produced mainly by
neurons and that its receptor (c-kitR), encoded by the protooncogene c-kit, is expressed in microglia, suggesting that SCF/c-kitR signaling may be involved in neuron-microglia interactions. We now report that SCF supports microglial survival in ***cultures*** , maintains them in process-bearing morphol., and inhibits microglial proliferation induced by colony stimulating factor-1. SCF potentiates microglial expression of the mRNAs of nerve growth factor, brain-derived neurotrophic factor and ciliary neurotrophic factor, and downregulates microglial expression of the inflammation-assocd. cytokines, tumor necrosis factor-.alpha. (TNF-.alpha.), and interleukin-1.beta. (IL-1.beta.). SCF potentiates lipopolysaccharide-stimulated, but attenuates interferon-.gamma. TFN.alpha. mediated expression of the mRNAs of IL-1.beta. and TNF-.alpha..
The SCF-induced expression of neurotrophin mRNAs is enhanced by the addn.
of lipopolysaccharide (LPS) but is reduced by IFN.gamma.. The interactions between SCF and LPS or IFN.gamma. in the regulation of inflammation-assocd. cytokine gene expression are accompanied by the

differential regulation of c-kitR in microglia. These observations suggest that SCF/c-kitR signaling modulates microglial activity.

L19 ANSWER 61 OF 75 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1998:89371 HCAPLUS
DOCUMENT NUMBER: 128:150403
TITLE: Construction of retroviral vectors for delivering viral and oncogenic inhibitors
INVENTOR(S): Raybak, Susanna M.; Cara, Andrea; Gusella, Gabriele Luca; Newton, Dianne L.
PATENT ASSIGNEE(S): United States Dept. of Health and Human Services, USA; Raybak, Susanna M.; Cara, Andrea; Gusella, Gabriele Luca; Newton, Dianne L.
SOURCE: PCT Int. Appl., 63 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9803669	A2	19980129	WO 1997-US12637	19970717 <--
WO 9803669	A3	19980226		

W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG

AU 9738049	A1	19980210	AU 1997-38049	19970717 <--
AU 734968	B2	20010628		
EP 917585	A2	19990526	EP 1997-935014	19970717 <--

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI

PRIORITY APPLN. INFO.: US 1996-22052P P 19960722
WO 1997-US12637 W 19970717

AB Cell transformation vectors for inhibiting HIV and tumor growth are provided. Optionally, the vectors encode RNAses A superfamily members such as eosinophil-derived neurotoxin (EDN) and onconase. Cells transduced by the vectors and methods of transforming cells (in ***vitro*** and in vivo) using the vectors are also provided. The viral and oncogene inhibitors are typically linked to a promoter such as retroviral HIV LTR promoters, the CMV promoter, the probasin promoter, and tetracycline-responsive promoters. The method is exemplified by construction of a viral vector contg. a HIV Rev-responsive element, an encephalomycocarditis virus internal ribosome entry site, a first viral inhibitor subsequence (for immunodominant proteins such as as Tat, Gag, or Rev), splice donor site subsequence, splice acceptor site subsequence, the above mentioned promoter, and the EDN coding sequence. The vector may be packaged in a ***liposome*** and its contents transduced into CD34+ hematopoietic ***stem*** ***cells*** , CD4+ cells, and transferrin receptor+ cells. Claimed vectors include pBAR, pBAR-ONC, and pBAR-EDN.

L19 ANSWER 62 OF 75 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1997:696847 HCAPLUS
DOCUMENT NUMBER: 127:290230
TITLE: Cryopreservation and extensive subculturing of human mesenchymal stem cells
INVENTOR(S): Bruder, Scott P.; Jaiswal, Neelam; Haynesworth, Stephen E.
PATENT ASSIGNEE(S): Osiris Therapeutics, Inc., USA; Case Western Reserve University; Bruder, Scott P.; Jaiswal, Neelam; Haynesworth, Stephen E.
SOURCE: PCT Int. Appl., 56 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9739104	A1	19971023	WO 1997-US6223	19970415 <--

W: AU, CA, JP, US
RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE

AU 9727304	A1	19971107	AU 1997-27304	19970415 <--

PRIORITY APPLN. INFO.: US 1996-15712P P 19960417
WO 1997-US6223 W 19970415

AB Disclosed is a cryopreserved prepn. of an isolated, homogeneous population of viable human mesenchymal stem cells obtained from periosteum, bone marrow, cord blood, peripheral blood, dermis, muscle, or other known sources of mesenchymal stem cells. After restoration from cryopreservation, the human mesenchymal stem cells can differentiate into cells of connective tissue types, including bone, cartilage, adipose, tendon, ligament, muscle, dermis, and marrow stromal connective tissue which supports the differentiation of hematopoietic stem cells. The cryopreserved prepn. of human mesenchymal stem cells binds to antibodies produced from hybridoma cell lines SH2, SH3, and SH4, which have the ATCC accession nos. HB 10743, GB 10744, and HB 10745, resp.

L19 ANSWER 63 OF 75 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1997:618206 HCAPLUS
DOCUMENT NUMBER: 127:259795
TITLE: Immortalized hematopoietic stem cell lines derived from mononuclear cells and their preparation by transformation with oncogenes and their uses
INVENTOR(S): Gopal, T. Venkat
PATENT ASSIGNEE(S): Amba Biosciences, L.L.C., USA
SOURCE: PCT Int. Appl., 34 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9732992	A1	19970912	WO 1997-US3186	19970307 <--

W: CA, JP
RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE

US 5811297	A	19980922	US 1996-612302	19960307 <--
CA 2248555	AA	19970912	CA 1997-2248555	19970307 <--
EP 954594	A2	19991110	EP 1997-915851	19970307 <--

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI

JP 2000508885	T2	20000718	JP 1997-531851	19970307

PRIORITY APPLN. INFO.: US 1996-612302 A 19960307
WO 1997-US3186 W 19970307

AB Immortalized hematopoietic cell lines including stromal cell lines useful for the in ***vitro*** maintenance of undifferentiated pluripotent hematopoietic stem cells are prepd. by transformation of mononuclear cells with oncogenes . Undifferentiated and differentiated immortalized stem cells are suitable for bone marrow transplantation, gene therapy and cell therapy applications, and as an in ***vitro*** model system for drug discovery and toxicol. testing. Transforming genes such as the SV40 or polyoma large T antigen genes or the adenovirus E1A or E1B genes, optionally in combination with genes for cell cycle-regulated transcription factors such as the E2F gene. The genes are introduced by transformation in complexes with basic peptide conjugates nuclear localization peptides. Immortalization of stromal cells with the SV40 large T antigen gene, the E2F gene, and the E1A and E1B genes is reported.

Culture methods for stimulating development of differentiated cells, including dendritic cells and macrophage from immortalized cell lines are described. ***Culture*** conditions for the induction of dendritic cell and macrophage formation are reported.

L19 ANSWER 64 OF 75 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1997:598675 HCAPLUS
DOCUMENT NUMBER: 127:291802
TITLE: CD28 expression by mouse mast cells is modulated by lipopolysaccharide and outer surface protein A lipoprotein from Borrelia burgdorferi
AUTHOR(S): Marietta, Eric V.; Wis, Janis J.; Weis, John H.
CORPORATE SOURCE: Div. Cell Biology Immunology, Dep. Pathology, University Utah School Medicine, Salt Lake City, UT, 84132, USA
SOURCE: Journal of Immunology (***1997***), 159(6), 2840-2848
CODEN: JOIMA3; ISSN: 0022-1767
PUBLISHER: American Association of Immunologists
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The concept of costimulation has been best defined in T cells and B cells. However, other cells that respond in an Ag-specific fashion, such as the mast cell, may be regulated by similar mechanisms. We have found that murine mast cells express one such costimulatory mol., CD28, which was previously defined as a T and NK cell-specific protein. While CD28 transcription appeared to be constitutive in murine mast cells, its cell surface expression was not. CD28 cell surface expression by mast cells derived from bone marrow with stem cell factor (SCF) was dependent upon activation with agents such as LPS, the Borrelia burgdorferi lipoprotein outer surface protein A, and PMA. Peak cell surface expression of CD28 by such cells occurred 24 h after LPS stimulation, 18 h after outer surface protein A stimulation, and 3 h after PMA stimulation. In contrast, mast cells derived from bone marrow with IL-3 did not demonstrate induction-specific cell surface expression of CD28. Instead, maturation of such cells in ***vitro*** allowed for the increased cell surface expression of CD28. Peritoneal mast cells ***cultured*** in SCF also expressed CD28. Mast cell CD28 was functional, in that crosslinking of CD28 on the surface on the IL-3-derived cells resulted in an increased level of c-jun transcripts. Addnl., crosslinking of CD28 simultaneously with PMA treatment of SCF-derived mast cells resulted in an increased level of IL-13 transcripts. These data suggest that mast cell CD28 has functions similar to those of T cell CD28.

L19 ANSWER 65 OF 75 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1997:481275 HCAPLUS
DOCUMENT NUMBER: 127:214667
TITLE: Isolation and identification of hematopoietic stem cell-stimulating substances from Kampo (Japanese herbal) medicine, Juzen-Taiho-To
AUTHOR(S): Hisha, Hiroko; Yamada, Haruki; Sakurai, masumi H.; Kiyohara, Hiroaki; Li, Yongan; Yu, Cheng-ze; Takemoto, Norito; Kawkamura, Hideki; Yamaura, Katsunori; Shinohara, Seiichi; Komatsu, Yasuhiro; Aburada, Masaki; Ikehara, Sussumu
CORPORATE SOURCE: 1st Dep. Pathol., Kansai Med. Univ., Osaka, Japan
SOURCE: Blood (***1997***), 90(3), 1022-1030
CODEN: BLOOAW; ISSN: 0006-4971
PUBLISHER: Saunders
DOCUMENT TYPE: Journal
LANGUAGE: English
AB We have previously found that TJ-48 has the capacity to accelerate recovery from hematopoietic injury induced by radiation and the anti-cancer drug mitomycin C (MMC). The effect are found to be due to its stimulation of spleen colony-forming unit (CFU-S) counts on day 14. In the present study, we attempt to isolate and purify the active components in TJ-48 exts. using a new in ***vitro*** hematopoietic stem cell (HSC) assay method. N-Hexane ext. from TJ-48 shows a significant stimulatory activity. The ext. is further fractionated by silica gel chromatog. and HPLC in order to identify its active components. 1H-NMR and GC-EI-MS indicate that the active fraction is composed of free fatty acids (oleic acid and linolenic acid). When 27 kinds of free fatty acids (com. available) are tested using the HSC proliferating assay, oleic acid, elaidic acid, and linolenic acid are found to have potent activity. The administration of oleic acid to MMC-treated mice enhances CFU-S counts on days 8 and 14 to twice the control group. These findings strongly suggest that fatty acids contained in TJ-48 actively promote the proliferation of HSCs. Although many mechanisms seem to be involved in the stimulation of HSC proliferation, we speculate that at least one of the signals is mediated by stromal cells, rather than any direct interaction with the HSCs.

L19 ANSWER 66 OF 75 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1997:450142 HCAPLUS
DOCUMENT NUMBER: 127:62875
TITLE: ***Culture*** of bone marrow stem cells partially or completely differentiated into connective tissue cells in a three-dimensional biocompatible and biodegradable matrix of hyaluronic acid derivative
INVENTOR(S): Abatangelo, Giovanni; Callegaro, Lanfranco
PATENT ASSIGNEE(S): Fidia Advanced Biopolymers S.R.L., Italy; Abatangelo, Giovanni; Callegaro, Lanfranco
SOURCE: PCT Int. Appl., 34 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9718842	A1	19970529	WO 1996-EP5093	19961119 <--
W: AL, AM, AU, AZ, BA, BB, BG, BR, BY, CA, CN, CU, CZ, EE, GE, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, RO, RU, SD, SG, SI, SK, TJ, TM, TR, TT, UA, UG, US, UZ, VN, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
CA 2238011	AA	19970529	CA 1996-2238011	19961119 <--
AU 9676934	A1	19970611	AU 1996-76934	19961119 <--
AU 709236	B2	19990826		
EP 863776	A1	19980916	EP 1996-939845	19961119 <--
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI, RO				
JP 2000500372	T2	20000118	JP 1997-519385	19961119

PRIORITY APPLN. INFO.: IT 1995-PD225 19951120
WO 1996-EP5093 19961119

AB A biol. material useful in skin grafts consists of (A) an efficient ***culture*** of autologous or homologous bone marrow stem cells partially or completely differentiated into connective tissue-specific cells, and the extracellular matrix secreted by these cells (or alternatively the extracellular matrix secreted by bone marrow stem cells partially or completely differentiated into a specific connective tissue or by the specific homologous mature connective tissue cells, said extracellular matrix being free from any cellular component) and (B) a 3-dimensional biocompatible and biodegradable matrix consisting of a hyaluronic acid deriv. Matrix (B) is free of immunogenic nonautologous proteins which might cause an immunol. reaction against the graft. Thus, a 3-dimensional nonwoven matrix of Hyaff 11 (benzyl hyaluronate) was seeded with human fibroblasts obtained from ***cultures*** of bone marrow mesenchymal stem cells and incubated in ***culture*** medium for 7-21 days to produce an artificial dermis. During incubation, the fibroblasts deposited an extracellular matrix contg. collagen types I, III, and IV, fibronectin, and laminin.

L19 ANSWER 67 OF 75 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1997:419574 HCAPLUS

DOCUMENT NUMBER: 127:133743
TITLE: Differentiation of embryonic stem cells into adipocytes in ***vitro***
AUTHOR(S): Dani, C.; Smith, A. G.; Dessolin, S.; Leroy, P.; Staccini, L.; Villageois, P.; Darimont, C.; Ailhaud, G.
CORPORATE SOURCE: Faculte des Sciences, Centre de Biochimie (UMR 6543 CNRS) Universite de Nice-Sophia Antipolis, Nice, 06108, Fr.
SOURCE: Journal of Cell Science (***1997***), 110(11), 1279-1285
CODEN: JNCSAI; ISSN: 0021-9533
PUBLISHER: Company of Biologists
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Embryonic stem cells, derived from the inner cell mass of murine blastocysts, can be maintained in a totipotent state in ***vitro*** . In appropriate conditions embryonic stem cells have been shown to differentiate in ***vitro*** into various derivs. of all three primary germ layers. We describe in this paper conditions to induce differentiation of embryonic stem cells reliably and at high efficiency into adipocytes. A prerequisite is to treat early developing embryonic stem cell-derived embryoid bodies with retinoic acid for a precise period of time. Retinoic acid could not be substituted by adipogenic hormones nor by potent activators of peroxisome proliferator-activated receptors. Treatment with retinoic acid resulted in the subsequent appearance of large clusters of mature adipocytes in embryoid body out-growths. Lipogenic and lipolytic activities as well as high level expression of adipocyte specific genes could be detected in these ***cultures*** . Anal. of expression of potential adipogenic genes, such as peroxisome proliferator-activated receptors .gamma. and .delta. and CCAAT/enhancer binding protein .beta., during differentiation of retinoic acid-treated embryoid bodies has been performed. The temporal pattern of expression of genes encoding these nuclear factors resembled that found during mouse embryogenesis. The differentiation of embryonic stem cells into adipocytes will provide an invaluable model for the characterization of the role of genes expressed during the adipocyte development program and for the identification of new adipogenic regulatory genes.

L19 ANSWER 68 OF 75 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1997:285391 HCAPLUS
DOCUMENT NUMBER: 126:312200
TITLE: Hemopoietic stem cell-stimulating ingredients in kampo (Japanese herbal) medicine "Juzen-Taiho-To"
AUTHOR(S): Sakurai, Masumi; Kiyohara, Hiroaki; Yamada, Haruki; Hisha, Hiroko; Li, Yongan; Takemoto, Norito; Kawamura, Hideki; Yamaura, Katunori; Shinohara, Seiich; et al.
CORPORATE SOURCE: Oriental Medicine Research Center, The Kitasato Institute, Tokyo, Japan
SOURCE: Bone Marrow Transplant.: Basic Clin. Stud., [Pap. Int. Symp. BMT] (***1996***), Meeting Date 1995, 64-67. Editor(s): Ikehara, Susumu; Takaku, Fumimaro; Good, Robert A. Springer: Tokyo, Japan.
CODEN: 64HVAW
DOCUMENT TYPE: Conference
LANGUAGE: English

AB We have previously found that one of the kampo (Japanese herbal) medicines, Juzen-Taiho-To (TJ-48), accelerates recovery from hemopoietic injury induced by radiation and anticancer drugs. N-Hexane-sol. substances from TJ-48 showed significant stimulatory activity on the proliferation of hemopoietic stem cells in ***vitro*** . Chromatog. sepn. and spectrometric identification using NMR and GC-MS revealed that the active fraction of TJ-48, which contained ***fatty*** acids such as oleic, linoleic and linolenic acids, accelerated ***stem*** ***cell*** proliferation. Oral administration of oleic acid to mitomycin C-treated mice enhanced CFU-S counts on day 14 to twice the control group. When the fatty acid compn. of TJ-48 was compared with other kampo medicines, the same active fatty acids were detected even in other kampo prescriptions which had not been found to accelerate recovery from hemopoietic injury, but in different ratios. Although not all kampo medicines tested showed the stimulatory activity, their fatty acid fractions did. These results suggest that hemopoietic stimulation by TJ-48 might be the result of the combined effect of the active unsatd. fatty acids and other hydrophilic ingredients.

L19 ANSWER 69 OF 75 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1997:130066 HCAPLUS
DOCUMENT NUMBER: 126:135585
TITLE: A method of transfection of cells using liposome-encapsulated nucleic acids
INVENTOR(S): Thierry, Alain; Dritschilo, Anatoly
PATENT ASSIGNEE(S): Georgetown University, USA
SOURCE: PCT Int. Appl., 29 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9640062	A1	19961219	WO 1996-US8619	19960606 <--
W: AU, CA, JP				
RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
US 5756122	A	19980526	US 1995-483090	19950607 <--
CA 2223637	AA	19961219	CA 1996-2223637	19960606 <--
AU 9659768	A1	19961230	AU 1996-59768	19960606 <--
AU 700376	B2	19990107		
EP 835099	A1	19980415	EP 1996-917085	19960606 <--
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				

PRIORITY APPLN. INFO.: US 1995-483090 19950607
WO 1996-US8619 19960606

AB An improved method for encapsulating high mol. wt. nucleic acids in liposomes, which provides for high nucleic acid entrapment efficiencies, is provided. The resulting compns. provide enhanced in ***vitro*** and in vivo transfection and are useful, e.g., in producing cell lines expressing a desired nucleic acid sequence. Thus, nucleic acids encapsulated in liposomes provided for greatly enhanced transfection efficiencies relative to other techniques.

L19 ANSWER 70 OF 75 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1997:88819 HCAPLUS
DOCUMENT NUMBER: 126:101468
TITLE: Chemically defined medium for human mesenchymal stem cells
INVENTOR(S): Marshak, Daniel R.; Holecek, James J.
PATENT ASSIGNEE(S): Osiris Therapeutics, Inc., USA
SOURCE: PCT Int. Appl., 35 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9639487	A1	19961212	WO 1996-US8405	19960603 <--
W: AU, CA, JP				
RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
US 5908782	A	19990601	US 1995-464599	19950605 <--
CA 2223582	AA	19961212	CA 1996-2223582	19960603 <--
AU 9659692	A1	19961224	AU 1996-59692	19960603 <--
EP 832188	A1	19980401	EP 1996-916987	19960603 <--
R: BE, CH, DE, FR, GB, IT, LI, LU, NL, SE				
JP 11506610	T2	19990615	JP 1996-501017	19960603 <--
AU 734174	B2	20010607	AU 2000-22584	20000324

PRIORITY APPLN. INFO.: US 1995-464599 A 19950605
WO 1996-US8405 W 19960603

AB A compn. and method are disclosed for maintaining the viability of human mesenchymal precursor cells in a serum-free environment, which compn. includes: (1) a min. essential medium, (2) serum albumin, (3) an iron source, (4) insulin or an insulin-like growth factor, and (5) at least one

amino acid selected from the group consisting of glutamine, arginine, and cysteine, and is free of serum. Also, a compn. and method are described for ***culture*** expanding human mesenchymal precursor cells in a serum-free environment. This compn. further includes a mitogen, particularly a serotonergic agonist. The cells are preferably isolated human mesenchymal stem cells.

L19 ANSWER 71 OF 75 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1994:673855 HCAPLUS
DOCUMENT NUMBER: 121:273855
TITLE: Improved method for gene transfer into mammalian cells and use of transfected cells in gene therapy and transplantation
INVENTOR(S): Dube, Ian D.; Kamel-Reid, Suzanne
PATENT ASSIGNEE(S): Can.
SOURCE: Can. Pat. Appl., 38 pp.
CODEN: CPXXEB
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
CA 2086844	AA	19940708	CA 1993-2086844	19930107 <--

AB A method of effecting transfer of a gene into mammalian cells, particularly hematopoietic cells, with a gene transfer vehicle, particularly a retroviral vector is described. The method comprises establishing a long term cell ***culture*** and exposing the ***culture*** to multiple, periodic infections of the vector contg. the gene and, preferably, comprising multiple, periodic partial substitutions of the medium and cells. Genetically marked cells are returned to autologous recipients in the absence of any type of conditioning. The method provides improved gene transfer efficiency without increased toxicity. The method was demonstrated with Moloney murine leukemia virus-derived vector N2 infection of canine mononuclear cells followed by transplantation of these transgenic cells into dogs. The results of these expts. indicated that long-term marrow ***culture*** (LTMC) cells could reconstitute the hematopoietic system of dogs; marrow ablative conditioning is not necessary for engraftment of the LTMC cells and may, in fact, compromise engraftment by upregulating endogenous hematopoiesis; only a few stem cells are cycling at any given time in dogs; and in ***vitro*** activated stem cells complete normal differentiation and proliferation programs when returned to the in vivo microenvironments from whence they came.

L19 ANSWER 72 OF 75 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1994:407031 HCAPLUS
DOCUMENT NUMBER: 121:7031
TITLE: Differential regulation of stem cell factor mRNA expression in human endothelial cells by bacterial pathogens: an in ***vitro*** model of inflammation
AUTHOR(S): Koenig, Andrea; Reuter, Marlene; Huang, Muhan; Sykora, Karl Walter; Corbacioglu, Selim; Welte, Karl
CORPORATE SOURCE: Dep. Pediatr. Hematol. Oncol., Child. Hosp., Hannover, Germany
SOURCE: Blood (***1994***), 83(10), 2836-43
CODEN: BLOOAW; ISSN: 0006-4971
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Prodn. of hematopoietic growth factors by endothelial cells plays a pivotal role during inflammatory processes. Stem cell factor (SCF) is known to be expressed constitutively in endothelial cells. To investigate the regulation of this cytokine expression by inflammatory stimuli, the authors cocultured human umbilical vein endothelial cells (HUVEC) with various gram-neg. bacterial strains (Escherichia coli, Yersinia enterocolitica, Chlamydia trachomatis, and Neisseria meningitidis, resp.). Expts. were preformed with bacterial concns. ranging from 102 to 107 bacteria/mL for 3 h. SCF-specific mRNA expression was studied using Northern blot anal. Stimulation with the enteropathogenic bacterial strains Y. enterocolitica and E. coli resulted in a significant concn.-dependent increase of SCF mRNA expression. Similar results were obtained in coculture expts. with N. meningitidis. As shown in expts. with E. coli, the accumulation of SCF transcripts was also time-dependent. In contrast, coculture of HUVEC with the intracellular gram-neg. strain C. trachomatis had no effect on SCF mRNA expression. To elucidate the role of gram-neg. bacterial cell wall components, the authors stimulated HUVEC with bacterial lipopolysaccharide (LPS). LPS induced a maximal SCF mRNA accumulation within 2 h followed by decrease of SCF-specific transcripts to the basal level after 24 h. In addn., the authors exposed HUVEC to the classical inflammatory cytokine interleukin-1.alpha. (IL-a.alpha.). Kinetic expts. showed a similar pattern of regulation with an increase of SCF mRNA within 2 h, persisting up to 12 h, and a decrease to basal transcription after 24 h. From these data, the authors conclude that SCF expression is regulated by inflammatory stimuli, such as IL-1.alpha. and bacterial pathogens, suggesting an important role of SCF during inflammation.

L19 ANSWER 73 OF 75 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1994:209534 HCAPLUS
DOCUMENT NUMBER: 120:209534
TITLE: Scar inhibitory factor and use thereof
INVENTOR(S): Young, Henry E.
PATENT ASSIGNEE(S): USA
SOURCE: PCT Int. Appl., 82 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9400484	A1	19940106	WO 1993-US5971	19930622 <--
W: AU, CA, JP				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
AU 9345431	A1	19940124	AU 1993-45431	19930622 <--
US 5827735	A	19981027	US 1996-650420	19960520 <--
PRIORITY APPLN. INFO.:			US 1992-901860	19920622
			WO 1993-US5971	19930622
			US 1995-393453	19950223

AB A scar inhibitory factor (SIF) protein isolated from mammalian basement membranes is provided that inhibits lineage commitment and differentiation of stem cells in ***vitro*** and in vivo. SIF inhibits stem cell commitment to a fibroblastic-scar phenotype without killing the cells, thus allowing their differentiation into normal tissue phenotypes. SIF thus limits the amt. of scar tissue formation at the site of delivery, while maximizing the potential for the ***stem*** ***cells*** to differentiate into other tissue phenotypes (muscle, cartilage, bone, ***fat*** , etc.). Therefore, it is useful in treating disorders and injuries that result in scar tissue or fibrous adhesion formation. SIF can be administered as a transdermal patch, incorporated into wound dressings, incorporated into absorbable suture material, incorporated into a bioerodible polymer matrix by itself or interspersed with differentiation factors near the site of tissue injury, sprayed onto prosthetic implants, or administered directly to cells ***cultured*** in ***vitro*** .

L19 ANSWER 74 OF 75 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1991:135880 HCAPLUS
DOCUMENT NUMBER: 114:135880
TITLE: Antidiabetic AD4743 enhances adipocyte differentiation of 3T3 T mesenchymal stem cells
AUTHOR(S): Sparks, Rodney L.; Strauss, Ethan E.; Zygmunt, Andrea I.; Phelan, Timothy E.
CORPORATE SOURCE: Vollum Inst. Adv. Biomed. Res., Oregon Health Sci. Univ., Portland, OR, 97201-3098, USA
SOURCE: J. Cell. Physiol. (***1991***), 146(1), 101-9
CODEN: JCLLAX; ISSN: 0021-9541
DOCUMENT TYPE: Journal
LANGUAGE: English

AB AD4743 is an antidiabetic agent that, when added to fetal bovine serum (FBS), has been shown to have adipogenic activity for some proadipocyte

cell lines once they reach confluence. In the current study, the effects of AD4743 on the growth and adipocytic differentiation of 3T3 T multipotential mesenchymal stem cells have been tested. 3T3 T cells, unlike other cells capable of undergoing adipocyte differentiation, are routinely induced to differentiate at low cell d. This is done using platelet-poor human plasma (HP), a potent inducer of growth arrest and differentiation. AD4743 (0-200 .mu.g/mL) was tested in varied concns. of HP or FBS, at varied cell densities, and at various times during growth and differentiation. AD4743 slowed the growth rate of 3T3 T cells and it induced their differentiation in a dose-dependent manner in medium contg. 10% FBS once they reached confluence. The data suggest that the ability of AD4743 to inhibit growth may also be coupled with its ability to enhance differentiation. In addn., AD4743 (1-10 .mu.g/mL) in the presence of 25% HP markedly increased the kinetics of adipocyte differentiation, at low (<5000 cells/cm2) or high cell d. Greater than 50% cell differentiation could be achieved in 2 days in low d. ***cultures*** ; 80-95% differentiation could be achieved in just 4 days, compared to 8-12 days in a typical ***culture*** . The max. amt. of differentiation in HP was potentiated by AD4743 to a greater degree in poor lots of HP; however, the kinetics were increased in all lots. Adipocytic differentiation was measured both morphol. and by Northern blot analyses of differentiation-specific genes. AD4743 at 1-10 .mu.g/mL appeared to be most effective, depending on the cell d. and other conditions. The mechanism of action of AD4743 remains to be elucidated, but the enhancement of adipocyte differentiation does not appear to occur via an insulin-dependent pathway.

L19 ANSWER 75 OF 75 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1980:579437 HCAPLUS
DOCUMENT NUMBER: 93:179437
TITLE: Effect of various kinds of drugs in ***vitro*** on the proliferation of leukopoietic stem cells (CFU-C)
AUTHOR(S): Onoda, Makoto; Shinoda, Masato; Tsuneoka, Kazuko; Shikita, Mikio
CORPORATE SOURCE: Hoshi Coll. Pharm., Tokyo, 142, Japan
SOURCE: J. Pharmacobio-Dyn. (***1980***), 3(7), S-21
CODEN: JOPHDQ; ISSN: 0386-846X
DOCUMENT TYPE: Journal
LANGUAGE: English
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AB Mitomycin C (I) [50-07-7] and 5-fluorouracil [51-21-8] inhibited the proliferation of leukopoietic stem cells in ***culture*** at 10-8 - 10-7 M, whereas erythromycin [114-07-8] and cephalosporin [11111-12-9] were cytotoxic at 10-5 - 10-4 M. However, penicillin [61-33-6], streptomycin [57-92-1], and cysteine [52-90-4] had no toxic effect at >10-4 M. In ***cultured*** mouse spleen cells, picibanil [39325-01-4], Escherichia coli lipopolysaccharides and WR-2721 [20537-88-6], enhanced the rate of prodn. of colony stimulating factor [62683-29-8] by these cells. The 2 tissue- ***culture*** methods mentioned are both useful for the evaluation of drug effects on the leukopoiesis.